

Military Command and Control Organisation

Volume 3

The Royal Air Force



VERSION 3 (08-04-08)

Front:

Plate 1: The RAF badge on the MoD Building, London.

Photo: 18-09-06

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PREFACE

This report is one in a series of five volumes examining the United Kingdom's 20th Century Military Command and Control Organisation. The project was commissioned by English Heritage and its scope extends to the following volumes:

Volume 1: Royal Navy

Volume 2: British Army

Volume 3: Royal Air Force

Volume 4: United States Army Air Force and United States Air Force

There are also two appendices, found in Volume 5:

Army Camps

Volunteer Lists

Research for compiling all four of the main reports was begun in April 2006 and the task was completed at the end of August 2007.

Research on the appendices was conducted between 2003 and 2007.

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ABBREVIATIONS USED IN THE TEXT

AA	Anti-Aircraft
A&AEE	Aircraft and Armaments Experimental Establishment
ADGB	Air Defence of Great Britain
AEAF	Allied Expeditionary Air Force
AMWD	Air Ministry Works Department
AOC	Air Officer Commanding
C-in-C	Commander in Chief
CO	Commanding Officer
CID	Committee of Imperial Defence
D/F	Direction Finding (radio aid)
EOR	Emergency (Sector) Operations Room
FAHQ	HQ Fighting Area
FAOR	Fighting Area Operations Room
GAF	German Air Force
LMG	Light Machine Gun
MG	Machine gun
MPBW	Ministry of Public Buildings & Works
MT	Mechanical (Motor) Transport
MU	Maintenance Unit
NAAFI	Navy, Army, Air Force Institute
NCO	Non-commissioned Officer
OC	Officer Commanding
O/R	Other Ranks (not Officers)
OTU	Operational Training Unit
PAC	Parachute and Cable (Airfield defence device)
PBX	Private Branch Exchange (Telephones)
R/T	Radio Telephone (strictly speech)
RAS	Reserve Aeroplane Squadron
RDF	Radio Direction Finding (Radar, strictly the Chain Home system)
RFC	Royal Flying Corps
ROC	Royal Observer Corps (initially Observer Corps)
RS	Reserve Squadron
SAA	Small Arms Ammunition
SHAEF	Supreme HQ, Allied Expeditionary Force
SHQ	Station Headquarters
SOR	Sector Operations Room
SMG	Sub-machine Gun
TDS	Training Depot Stations
TSS	Training Squadron Station
UAS	University Air Squadron
VP	Vulnerable Point
W/T	Wireless Telegraphy (strictly Morse)
WAAF	Women's Auxiliary Air Force

Part 1 – Introduction

1.1 – Structure of the Report

The main body of this volume is divided into the following parts:

- Part 1 – Introduction
- Part 2 – RAF Command Structure to 1945
- Part 3 – RAF Commands, post WWII
- Part 4 – The Growth of the Air Ministry
- Part 5 – The Wartime Command Headquarters
- Part 6 – RAF Airfield Construction Service
- Part 7 – The RAF Regiment
- Part 8 – Royal Observer Corps
- Part 9 – Aerodrome Defence Scheme Organisation
- Part 10 – The Development of the WWII Air Defence System
- Part 11 – Gazetteer of Building Types (Airfields)

Parts 2 and 3 of this document describe the growth of the Royal Air Force from its conception until the end of the 20th century.

Part 4 examines the growth of the Air Ministry from the troubled early days until its merge into the Ministry of Defence in 1964.

Part 5 describes the methods taken by the service to ensure continuation of operation throughout WWII in the face of bombing by the enemy.

Parts 6 to 8 describe the development of three specialised units controlled by the Air Ministry.

Part 9 is concerned with the methods of aerodrome defence. Two areas are investigated; that of a typical airfield – in this case Shawbury, plus a detailed analysis of London's air defence stations.

The Development of the WWII Air Defence System is described in Part 10, which relates to the introduction of the sector scheme and the integrated defence system which proved its worth in the Battle of Britain.

Part 11 contains a number of the various types of command and control centres and operations building developed from the 1930s and into WWII.

The final third of the document contains a list of headquarters sites, plus a series of diagrams showing the command structures throughout the 20th century.

1.2 – Notes on Sources and Limitations of the Report

- a) The RAF command organisation, has been well documented throughout the last century. This is in complete contrast to that of the Army and the Navy for which there are very few secondary sources available, such as published works on the British Army home forces organisation. The primary sources used in this volume are mainly based on the documentary records of the armed forces, and their parent civil ministries from 1900 to 1989, but with a particular emphasis on WWI and WWII. These are almost entirely found at The National Archives (TNA) located in London, at Kew.
- b) A particular difficulty encountered was the huge number of abbreviations that have been used in original sources. With the formation of the Ministry of Defence this problem escalated to a new level. These are often inconsistent, varying from one file or document to another, or even within the same document! For this reason abbreviations have been kept to a minimum within this report, and are explained where appropriate. A list is included at the beginning of the document.
- c) There are also a very large number of typographical errors in official sources; particularly with names and locations of establishments – Scottish and Welsh examples being typically erroneous. These have been corrected within the document, and marked with a ‘?’ when uncertainty still exists.
- d) Two published books and two web sites were found to be invaluable:
 - RAF Flying Training and Support Units*: Sturtivant R, Hamlin, J and Halley, J, 1979
 - Attack Warning Red*: Wood, D, 1976
 - Subterranea Britannica* (generally post WWII ROC sites etc): www.subbrit.org.uk
 - Air of Authority - A History of RAF Organisation* www.rafweb.org
- e) A comprehensive list of resources is found at the end of the document.
- f) The works listed above, and the file sources at the TNA have been used here to log the changes in organisation and structure to the home commands over a period of time. It has not been possible within the time frame allowed for researching and writing this report to get a completely exhaustive (and totally accurate) picture. This report therefore does not provide a definitive historical background, but it does set out a salient chronology that provides an overview of the command and control organisation of the Royal Air Force at home. There is however, much scope for further research.

1.3 – Air Forces (Constitution) Act of 1917

- a) A lengthy investigation by General Jan Smuts into a number of problems with the flying services experienced during the Great War led to the Air Forces (Constitution) Act on 29 September 1917. This laid down the framework for the establishment of an Air Ministry. The central feature would be an Air Council on the lines of the Board of Admiralty and Army Council. Its initial task would be to plan and bring about an amalgamation of the Royal Flying Corps, (RFC) and Royal Naval Air Service, (RNAS) into the Royal Air Force (RAF). It would also organise and plan that amalgamation, and the transfer of its administrative functions from the Admiralty and War Office.

- b) The Royal Air Force came into existence on 1 April 1918, becoming the World's largest and first independent air force. The Women's Royal Air Force was also formed at this time. The first task was to set up a command structure around which the new Force could be administered.
- c) Operational control was delegated to command level, which reported directly to the Air Ministry until 1964 when this was replaced by the Ministry of Defence. Prior to that date the overall controlling body was the Air Council, which consisted of both military officers and politicians. The Air Staff was responsible for the planning and policy making. Senior Air Officers were in charge of each the main policy making functions, under the overall control of the Chief of the Air Staff.
- d) Because commands often controlled subordinate formations commanded by air officers, those formations were usually commanded by an Air Officer Commanding-in-Chief (AOC-in-C). Commands have been and remain to be formed on both a geographical and a functional basis.

1.4 – Development of Commands

An analysis into the command structure of the RAF during the 20th Century shows that the changes in that structure can be categorised into five distinct stages. Within this report each phase is arranged as a section:

1912–1920 The Formative Phase (the RFC, RNAS and the RAF)

1920–1934 The Dormant Phase

1935–1939 Expansion Period – preparation for war

1939–1946 World War Two

1946–Present.

1.5 – Additional RAF Organisation

There are a further three organisations within the RAF that required their own command structure:

RAF Airfield Construction Service

RAF Regiment

Royal Observer Corps

Intentionally
Blank

Part 2 – RAF Command Structure to 1945

2.1 – The Formative Phase, 1912–1920

2.1.1 The Royal Flying Corps

- a) On 15 April 1912, the recommendations by the Sub-Committee of Imperial Defence resulted in a Royal Warrant to constitute the Royal Flying Corps (RFC). The Government published a White Paper giving details of its formation; a sum of £320,000 had been allotted to the War Office for this purpose, and £90,000 was to be spent on a new aerodrome at Upavon on Salisbury Plain. The army already owned 16 aircraft, a further 36 new aircraft (half of them British) had been ordered to supplement these.
- b) The sections within the Royal Flying Corps consisted of:
 - A Central Flying School at Upavon, for training pilots
 - A Military Wing (consisting of a proposal for 7 squadrons of 12 aeroplanes)
 - A Naval Wing
 - The Reserve
 - The Army Aircraft Factory at Farnborough, to supply aircraft and engines for the new service. It would be known as the Royal Aircraft Factory, (confusingly, the 'RAF').
- c) A system of small units, loosely based on the French model (called 'escadrille' consisting of six aircraft), to be known as a Squadron was chosen, and these were to be commanded by a Major.¹ This was comparable with a British Army battery of field artillery with about 200 men. The British flying unit of this size consisted of 12 aircraft, which could easily be sub-divided into three smaller formations known as a flight of four aircraft, each with up to six pilots, one of whom would be a flight commander.² A flight was designed to be a self sufficient unit on its own, and could therefore be detached away from the main unit. Personnel were on hand to help get the aircraft into the air, including pushing the aircraft out of the sheds, and to carry out tasks such as refuelling as well as minor repairs. Major repairs were to be carried out at the squadron's headquarters, where there was a dedicated team of tradesmen to take on this work.
- d) The control of military aviation transferred on 1 September 1913 from the Master-General of Ordnance to a new Department of Military Aeronautics. In command was Director-General, General D Henderson (d.1951).
- e) In June 1914 the RFC was split in two units, when the Admiralty announced the formation of the Royal Naval Air Service (RNAS). This new service consisted of four elements:
 - The Air Department (Admiralty)
 - The Central Air Office
 - The Royal Naval Flying School
 - Royal Naval Air Stations.
- f) By 4 August 1914, the day Britain declared war with Germany, the RNAS equipment at that time consisted of just seven airships and 70 aircraft.

¹ Raleigh, Vol.1, p.201

² The number was later increased to 24 (or three flights of eight) but not all of these may be airworthy at the same time.

g) The establishment comprised an airship section with stations at Kingsnorth and Farnborough, and nine aeroplane and seaplane stations:

- Calshot – seaplanes
- Dundee – seaplanes
- Eastchurch (training) – established in December 1911 as the Naval School of Flying
- Felixstowe – seaplanes
- Fort Grange – landplanes
- Isle of Grain
- Great Yarmouth – seaplanes and landplanes
- Killingholme and Skegness – seaplanes and landplanes



Plate 2: The War Office

Photo: 11-09-06

h) On 4 August 1914 the RFC, controlled by the War Office, comprised four operational squadrons, 179 aircraft, and five home aerodromes:

- Farnborough – headquarters and aircraft park
- Fort Grange – training
- Montrose – training
- Netheravon – training
- Upavon – Central Flying School

2.1.2 Organisation at Home for the War in Europe

a) On 29 November 1914, a scheme was proposed where units would be arranged in groups of two to four squadrons, each group being called a Wing. The 1st Wing, intended to operate with

the Indian Corps and the Fourth Army Corps, consisted of 2 and 3 Squadrons; the command was given to Lieutenant-Colonel H M Trenchard.

- b) The 2nd Wing, intended to operate with the 2nd and 3rd Army Corps, consisted of 5 and 6 Squadrons, commanded by Lieutenant-Colonel C J Burke. No.4 Squadron, and the Wireless Flight – which later became 9 Squadron – were kept under direct control of the RFC headquarters. Shortly after the battle of Neuve-Chapelle, the 3rd Wing was formed under Lieutenant-Colonel H R M Brooke-Popham.
- c) What had been the Military Wing at Farnborough was then decentralised into two separate commands, the Administrative Wing, and the 4th Wing, each controlled directly by the War Office. The Administrative Wing at Farnborough, consisted of 1 and 2 Reserve Aeroplane Squadrons, a depot, a (new) aircraft park, and a records office, all of which were placed under the command of Lieutenant-Colonel E B Ashmore. The 4th Wing, with its headquarters at Netheravon, was placed under the command of Lieutenant-Colonel J F A Higgins, and consisted of a new 1 Squadron, and a mobilising 7 Squadron, all of which were preparing for service in France.³
- d) The institution of wings was a great step forward, and made it easy to provide for later additions to the strength of the RFC. When newly-formed squadrons began to appear in number, they were simply formed into wings. In the winter of 1915–16, the latter were combined in pairs to form brigades.
- e) A brigade became a self-sufficient unit to work with an army; it was commanded by a brigadier-general and consisted of, besides the two aeroplane wings, a third wing for kite balloons, an aircraft park, and everything else necessary for a complete an aerial force.
- f) For operations in Europe, fighting squadrons formed one wing, and these were symmetrically paired with another made up of squadrons designed for artillery co-operation, close reconnaissance, and photography.
- g) A wing which carried out long reconnaissance work and offensive patrols, such as bombing, air combat, and protecting observation aircraft, was called an army wing, and worked for the Army HQ.
- h) A wing which observed and photographed for the Corps HQ, reporting on the character of the enemy defences, the movement of troops, and the effects of the British artillery fire, became known as a corps wing, which was responsible to Corps HQ.
- i) From the summer of 1916 until the formation of the RAF at the Hotel Cecil in 1918, the De Keyser Hotel on Victoria Embankment was requisitioned and became RFC Headquarters.⁴ This is thought to be the first building to be named *Adastral* House. The word '*Adastral*' was first used as the telegraphic address of the 18th Wing HQ at Carters Hotel, 14/15 Albemarle Street – believed also to be derived from the RFC motto '*Ad Astra*' plus '*L*' for London.

2.1.3 Royal Naval Air Service

- a) On the outbreak of war, the role of the RNAS supported the British Expeditionary Force during its passage across the Channel, and for this purpose regular patrols were flown between

³ Raleigh, Vol.1, p. 282-285

⁴ Demolished in 1921 and replaced by the Lever Building (now Unilever Building)

Westgate and Ostend. The earliest measure of defence for the UK ordered by the Admiralty, was the institution of coastal patrols off the East Coast, from Kinnaird's Head in Aberdeenshire to Dungeness. Incomplete RFC squadrons undertook the northern and southern extremes, while the RNAS patrolled the most vulnerable part.

- b) These arrangements were altered slightly after the Germans had established themselves in Belgium, as it was believed that they would use Belgium to attack the vulnerable points (VP) along the Thames Estuary. For home defence the RNAS was therefore concentrated in a line between the Humber and the Thames Estuaries.
- c) For anti-submarine patrol duties in 1918, there were four main types of operational RNAS stations:
 - Marine Operations (Aeroplane) Station – aerodrome for landplanes
 - Marine Operations (Seaplane) Station – seaplane station for seaplanes
 - Marine Operations (Balloon) Stations – aerodrome for balloons used in conjunction with Naval craft on convoy or patrol duties
 - Airship Patrol Station – either dedicated to rigid or non-rigid airships
- d) Each station came under the command of the local Naval Commander-in-Chief, or senior Naval Officer at the nearest Naval base, e.g. the Marine Operations (Aeroplane) Station at Sea Houses in Northumberland, for operations came under the senior Naval Officer, Tyne.⁵

2.1.4 Home Defence

- a) A plan was drawn up by the Admiralty and the War Office during October 1915, for an air defence scheme which formed the embryo of what became known as London Air Defence Area (LADA). The idea was that an observer reporting screen be set up from the coast to within a few miles of London, behind this would be three night-landing grounds each manned by two pilots of the RFC.
- b) A screen of mobile guns and searchlights was located on the outskirts of north-east London. The scheme was eventually expanded whereby the United Kingdom was divided into two main commands, known as LADA and Northern Air Defence Area (NADA).

2.1.5 RFC Home Defence Scheme (Direct Protection of Vulnerable Points)

- a) The War Office took over from the Admiralty the function of Home Defence (HD) against enemy aircraft. On 30 January 1916 RFC Brigade formations came into effect, and by February, the War Office had now established a formal Home Defence Scheme, with aircraft, anti-aircraft guns, and searchlights. Under Sir David Henderson, two BE2cs manned by specially trained pilots in night flying were to be maintained on a ring of ten aerodromes encircling London, including:

Chingford	Hounslow	Croydon
Joyce Green	Farningham	Northolt
Hainault Farm	Wimbledon	Hendon

- b) Night landing grounds were also established for the Eastern Counties, Midlands and in the North of England. At this stage no 'fighter' stations existed as such, BE2c (HD) aircraft were

⁵ AIR 1/452/312/26 & AIR 1/453/312/26

simply allotted to training squadrons based at Doncaster, Dover, Norwich, and Thetford. Six aircraft (one flight) were also sent to reinforce 5 Reserve Squadron in the defence of Birmingham and Coventry.

- c) The RFC also became responsible for the defence of Newcastle, and three BE2cs for this purpose were on constant readiness at Cramlington. By March 1916, units for the defence of Leeds and Hull were located at Bramham Moor, and Beverley respectively.
- d) Meanwhile on 1 February 1916, HD detachments located at the various training squadrons were grouped together in a single command under Major T C R Higgins, who had been officer commanding 19 Reserve Squadron at Hounslow.
- e) The 16th (Home Defence) Wing, 6th Brigade Squadrons for June 1916 were:

33 Squadron at Bramham Moor	36 Squadron at Cramlington
38 Squadron at Castle Bromwich	39 Squadron in London Defence Area
50 Squadron at Dover	51 Squadron at Norwich

2.1.6 The Barrage Line (Indirect Protection of Vulnerable Points)

- a) From 15 July 1916, HD stations were beginning to be established along a line between Dover and Edinburgh, to form a barrage-line of searchlights, observation posts, and aerodromes on high ground (mainly along the Middle Jurassic spine) from the London Anti-Aircraft (AA) Defence Zone to Blyth. Similar barrage-lines were also established in Kent, Essex, and Norfolk. Searchlights were placed under the direction of the local squadron commander.
- b) The previous idea of close defence of VPs was therefore abandoned, and the new approach was to form a system of defensive bands across the line of the enemy's approach (similar to the RNAS patrol lines). This was to ensure that the enemy was intercepted before it was able to get close to the VP, and to establish this line, squadron HQs and flight stations were moved further east, away from the cities and factories that they were protecting.
- c) Searchlights and observation posts were to be situated along the patrol line of aeroplanes, but usually placed forward of the nearest aerodrome (eastwards) to allow time for the defending aeroplanes to reach the required height of 5,000 feet to intercept. Searchlight crews communicated with the squadron headquarters by telephone. When news was received that enemy aircraft were approaching, the normal practice was to send up two or three aeroplanes from each flight to patrol the specified areas.
- d) To reflect this change and subsequent expansion, the 16th (Home Defence) Wing became Home Defence Wing on 29 July 1916, and in March 1917 this was raised to group level (Home Defence Group). As further HD squadrons formed, so the command level was raised in status. Five months later the group became a Brigade (Home Defence Brigade), which in turn was re-designated as the reformed 6th Brigade on 12 October 1917.
- e) At Home Defence Group level, came decentralisation of HD to form five geographically based HQ Wings to administer HD squadrons and their flights. To enable this administration to work, the wings were managed by two sub-commands – Northern Group and Southern Group – which came directly under 6th Brigade.
 - Northern Home Defence Wing (46th Wing), HQ at York
 - Midland Home Defence Wing (47th Wing), HQ at Cambridge

- North Midland Home Defence Wing (48th Wing), HQ at Gainsborough
 - Eastern Home Defence Wing (49th Wing), HQ at Upminster
 - Southern Home Defence Wing (50th Wing), HQ at Hotel Cecil and Great Baddow
- f) From 1917 the first purpose-built HD stations were being built, but wing headquarters remained in requisitioned property.

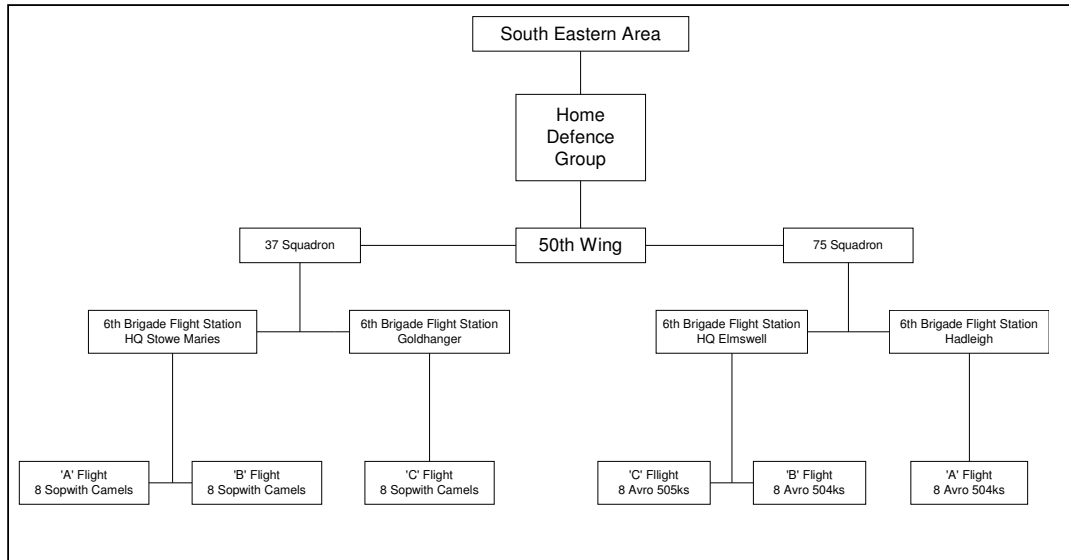


Fig. 1: 50th Wing Command Structure – March 1917



Plate 3: The former Carter's Hotel 14–15 Albemarle Street, London

It was used as the 18th Home Defence Wing HQ during WWI. It is thought to be the location of the first use of the word '*Adastral*' taken from the RFC motto *Ad Astra plus 1* for London and used as its telegraphic address. Photo: 17-09-06

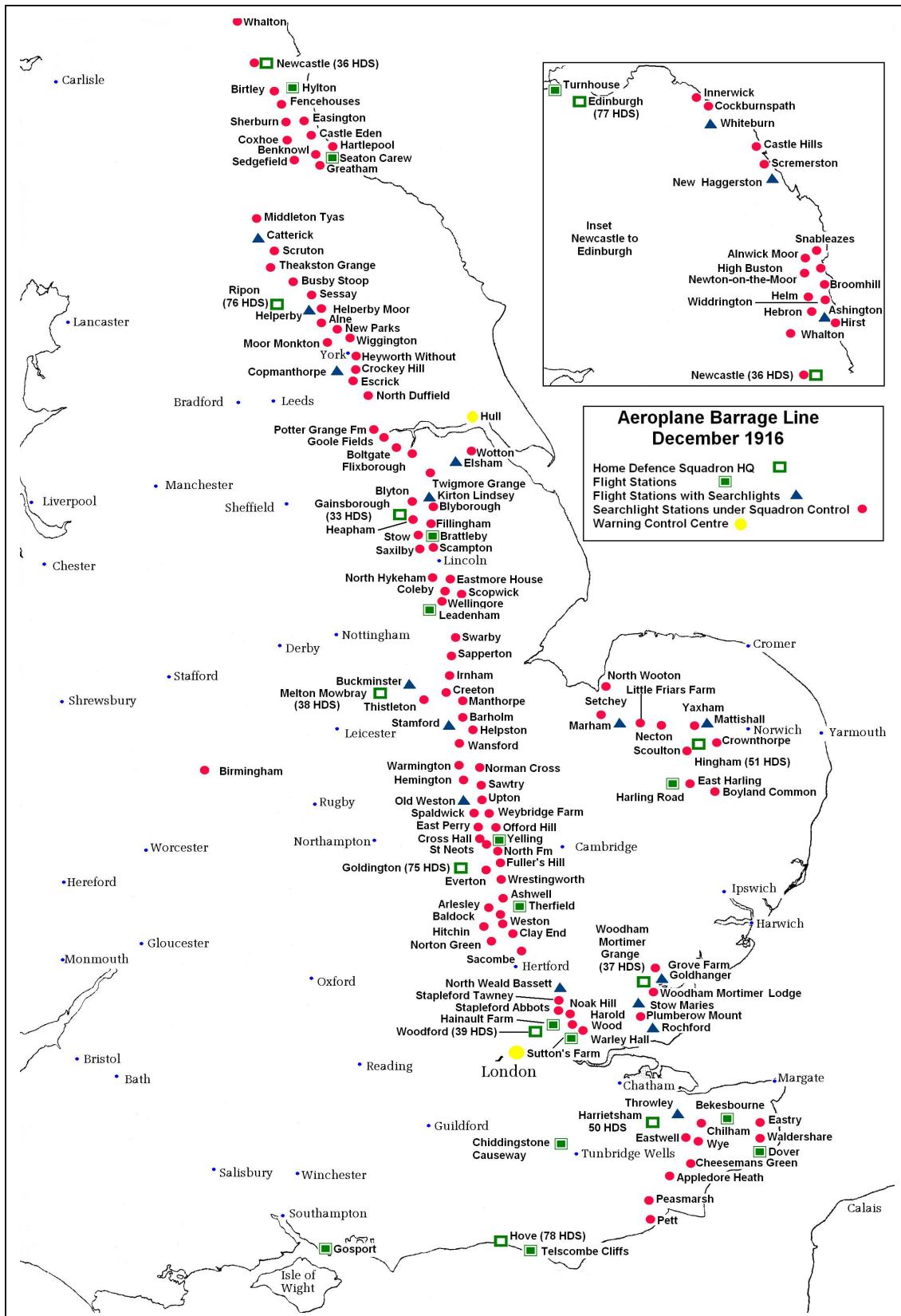


Fig. 2: The Aeroplane Barrage System

2.1.7 Warning Organisation

- a) One of the reasons for the success of the air defence system was the gradual building up of the Observer Service, with the telephone network that was essential for its operation. At first the personnel of the police force formed the early members of the Metropolitan Observer Service, which, initially only covered the London area.
- b) It was at a conference on 25 May 1916, between officials of the Post Office, Home Office, and the Railway Executive Committee, that Lieutenant-Colonel Philip Mauld, suggested that an early warning system based on the existing telephone organisation should be implemented. His idea was that eight warning control centres, each with a warning controller should be located at one of the main centres of the telephone system. The controller would be responsible for collecting and passing on information, and for issuing warnings of an impending air-raid. Each control area was to be sub-divided into warning districts of 30–35 square miles with a system of observer posts. Information from these posts was to be passed to the local controller, for plotting the progress of the path of Zeppelins or enemy aircraft. A system of girls' Christian names was used for German airships and boys' names for British airships. The Warning Control Organisation came into operation on 25 May 1916.
- c) A Royal Navy hydrographer, Rear-Admiral Parry, had invented an instrument for working out the bearing of an aircraft. It consisted of a flat wheel with its circumference marked in bearings and a radial arm pivoted at its centre, on which was mounted a sighting rod. When an observer had sighted on the target, it displayed the bearing and angle of the target. Simply by comparing readings from several observer posts, it was possible to fix the position of the target. The information from the observation posts was then fed to a sub-control, where the positions of enemy aircraft were telephoned to the LADA central control room.
- d) The LADA central operations room was established at Horse Guards, Spring Gardens near Admiralty Arch. On 12 September 1918, the London Defence Area control and reporting system was declared operational, but the last German aircraft raid on London had taken place on the night of 19 May. Reports from AA gun sites, observation posts, sound locators, and searchlight sites were displayed on a squared map fixed to a raised dais. Ten plotters transferred the incoming information, using different coloured symbols and discs, onto maps and a vertical plotting chart.
- e) The inner limit ring of fire from the Outer London AA Gun Barrage was called the Green Line, which ran from:

Shenfield railway station–High Ongar church–Ware–St Albans–Kings Langley–
Uxbridge–Weybridge–Effingham–north-west corner of Chevening Park–
Hartley–Orset–Shenfield railway station.
- f) The RFC squadrons were prepared to attack as soon as possible after a hostile aircraft crossed the 'Green Line' on its way to London. Information and orders for readiness and operations were issued from the London Warning Control to the AA defences and the squadrons. Once aircraft were airborne, a system of ground-to-air directing arrows (200yds long and 50yds wide, made from fabric strips) were displayed to point in the direction of hostile aircraft. These were located at 22 sites within the Inner London AA Defence sites. Each squadron had a number of set patrol courses allocated to it, e.g. for operations against airships at night – Patrol J (37 Sqn) from Stow Maries flew the course: Hatfield Peverel to Stow Maries.

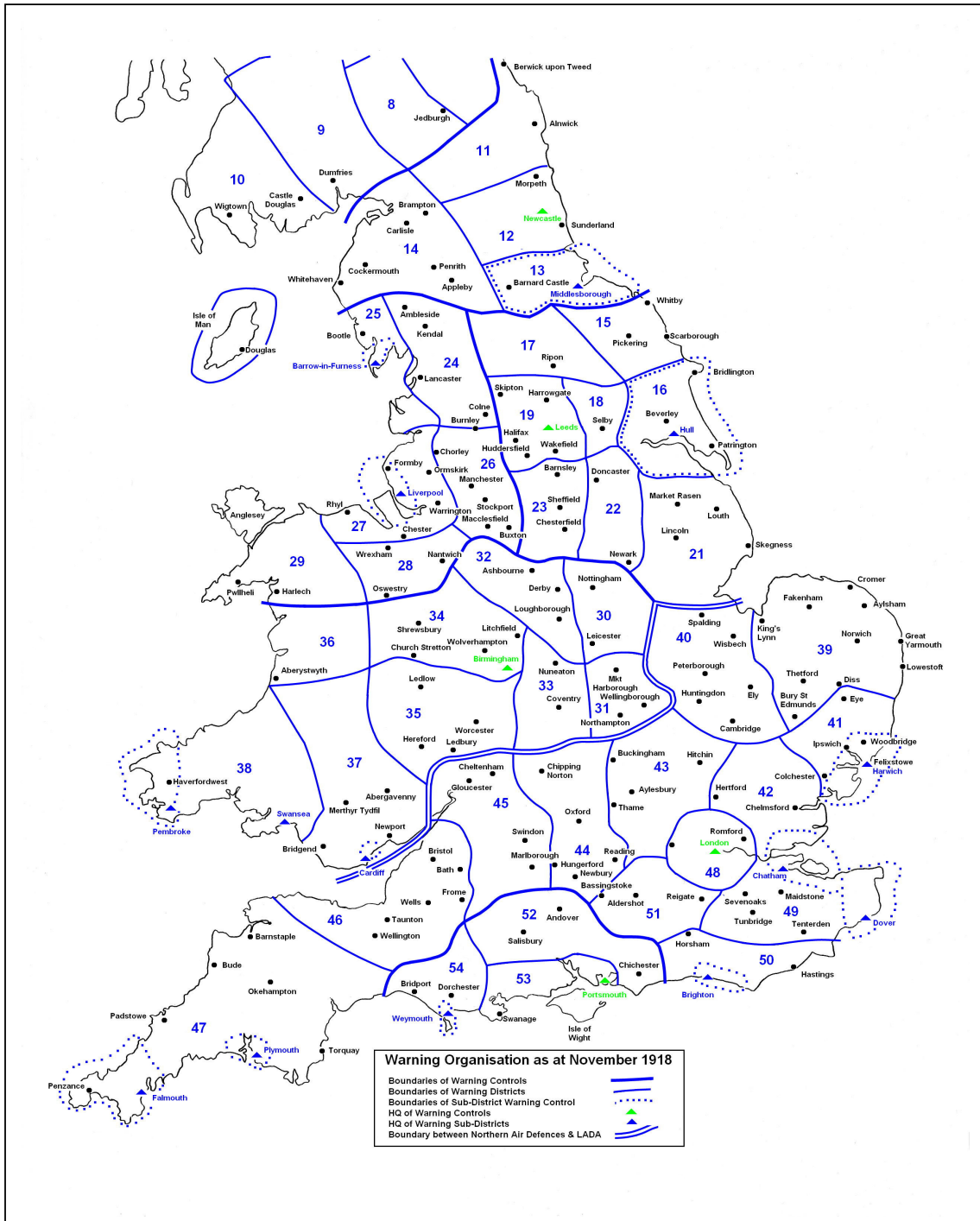


Fig. 3: Warning Organisation – November 1918



Plate 4: The LADA Operations Room, Horse Guards Parade, London c.1918.

Photo: IWM via Steve Woolford

2.1.8 The Air Ministry and the Royal Air Force

- a) On the advice of Lord Curzon (G N Curzon 1859–1928) in May 1916, the Air Board was set up for the purpose of co-ordinating and supervising the design, construction of aeroplanes, aero-engines, and other aviation related craft and equipment for both services. The Board was not involved in the administration or operations of either the RFC or the RNAS. There were a succession of Boards under different Presidents, each adopting greater responsibility than the last in an attempt to supply the needs of the RFC and RNAS. The Presidents were:
- Lord Curzon (May 1916)
 - Lord Cowdray (January 1917)
 - Lord Rothermere (late 1917)

- b) An office was initially established at 19 Carlton House Terrace⁶ until the Board moved in January 1917 to the Hotel Cecil,⁷ located on the Strand, which it shared with other Government Departments including the Ministry of Munitions.
- c) The new Air Board was purely advisory, it being limited by its constitution and powers, and at first did very little to improve matters. In its earliest form it acted not as a board, but more of a conference between the War Office, Admiralty, and the Ministry of Munitions – who consulted with each other over the claims of the RFC and RNAS for their supplies. In December, Asquith's Government fell, and the new Coalition Government reorganised and strengthened the Air Board by making it an independent ministry with executive powers. This was made possible on 22 December 1916, when the New Ministries and Secretaries Act became law. Within this law it was stated that the president of the new Air Board 'shall be deemed to be a minister appointed under this Act, and the Air Board a ministry established under this Act'. Lord Cowdray (W D Pearson 1856–1927) was appointed to head the new organisation which remained as the Air Board.



Plate 5: The surviving facade of the Hotel Cecil facing the Strand.

Shell Mex House is accessed via the central archway. Photo: 18-09-06

- d) The Prime Minister, Lloyd George, invited General Smuts (1870–1950) to look at the question of organisation, and to make the best possible use of the air weapon for both attack and defence. On 11 July 1917, a War Cabinet Committee was set up with Smuts, a representative from the Admiralty, General Staff, and Field-Marshal Commanding-in-Chief Home Forces.
- e) Smuts first looked at the question of the defence of London, on which he submitted a report to the War Cabinet on 19 July. He found that although there was a large number of personnel and

⁶ No.1 Carlton House Terrace was the home of Lord Curzon, the Air Board used 19 Carlton Terrace which is now demolished.

⁷ One facade of the former hotel is extant which fronts onto the Strand, behind this is Shell Mex House completed in 1931.

machines in place to defend London, they were not unified, but were all independently controlled by several different authorities. He therefore recommended that a unified command under a first-class officer should be implemented to take into account the complete defence forces network against air attacks on London. General Ashmore was appointed for this purpose. Three or four squadrons were recommended for formation which could intercept the enemy before they reached London. Furthermore, AA guns should be placed outside London to engage the enemy before they reached their targets.

- f) The second and final report (GT1658, WC223) presented by Smuts on 17 August 1917 looked at organisation and the direction of aerial operations. He set out to consider certain questions, including:
 - Should an Air Ministry be responsible for all air organisation and operations?
 - Shall there be constituted a unified Air Service embracing both the RNAS and RFC?
- g) The War Cabinet decided to accept in principle the recommendations, and the announcement to establish an Air Ministry was made in the House of Commons on 16 October, and was passed through Parliament to obtain the Royal Assent on 29 November 1917.
- h) On 21 December 1917, an Air Council, Air Ministry was set up by Order in Council with Lord Rothermere (H S Harmsworth, 1868–1940) as the first Secretary of State for Air in January 1918, and Trenchard was recalled from France to become the Chief of Air Staff.⁸
- i) The Air Ministry offices were still established in the Hotel Cecil, until it was transferred to its new permanent office at 2 Kingsway, London (later called Adastral House), this being the second building to adopt the name. It took over the functions of the old Air Board, the Director General of Military Aeronautics at the War Office, and the Director of Air Services at the Admiralty – but not airships and balloons which came under the Director of Naval Construction. The Ministry's first task would be the formation of the Royal Air Force.
- j) With the amalgamation of all air services and the formation of the Royal Air Force in April 1918, the United Kingdom was divided into five geographical commands. Within the new command structure for home defence, were the original RNAS airship, aeroplane, balloon, and seaplane patrol stations, as well as RFC 6th Brigade Squadron, and their associated landing grounds.
- k) A separate corps for women – the Women's Royal Air Force was formed on 1 January 1918, with Lady Gertrude Crawford appointed as Chief Superintendent.

2.1.9 RFC/RAF Training

- a) Before January 1916 the training of pilots was carried out with reserve aeroplane squadrons, on 13 January the title was shortened to reserve squadrons. These were administered firstly through 6th Brigade in its original form, but in July of that year 6th Brigade became Training Brigade. This brigade was decentralised with the formation of three geographical areas:
 - Northern Group Command,
 - Eastern Group Command
 - Southern Group Command

⁸ Trenchard resigned and left this post on 13 April 1918 to be replaced by Major-General Sir Fredrick Sykes.

- b) These were responsible for the training and administration of all training units within their defined areas, and each one had up to four wings. At the beginning of 1917, approval was given for the expansion of the RFC from 20 to 106 service squadrons, and from 37 to 97 reserve or training squadrons. Training Brigade was commanded by Brigadier-General J M Salmond.
- c) At the end of May 1917 Reserve Squadrons became Training Squadrons, and most of these were combined in pairs during 1918 to become Training Depot Stations. Those that remained as squadrons became Training Schools in 1919, which later became Flying Training Schools.
- d) On 5 August 1917, Training Brigade was raised to 'Division' status, (Training Division), and the sub-commands became Training Brigades in their own right, e.g. Southern Group Command became Southern Training Brigade. An additional unit was formed in September 1917, known as Western Training Brigade. On October 18, Salmond transferred to the War Office as Director-General of Military Aeronautics and Major-General C A H Longcroft, the commander of 5th Brigade, took command of Training Division.

2.1.10 Technical Training

Technical Training began in early 1917 at an old jam factory at Coley Park, Reading. The school was an offshoot of the No.1 School of Military Aeronautics, which was also sited in Reading at Wantage Hall. The latter was responsible for teaching a variety of subjects, including bomb targeting and aerial observation. The demand for trained men to support air operations in the latter months of WWI required expansion, and Coley Park was clearly too small; the facility moved to the Halton Estate – later becoming No.1 School of Technical Training. This would initially concentrate on mechanical trades, such as engine fitters, armourers, riggers, and sheet metal workers. It would expand over the next few years to administer full three-year apprenticeship schemes.

2.1.11 The Five Numerical Areas

With the amalgamation of all the air services and the formation of the RAF, the United Kingdom was now divided into five geographical areas, each commanded by a major-general:

a) Area 1 – London

Bedfordshire	Berkshire	Buckinghamshire	Cambridgeshire
Essex	Hertfordshire	Huntingdonshire	Kent
London	Middlesex	Norfolk	Northamptonshire
Oxfordshire	Suffolk	Surrey	Sussex

b) Area 2 – Salisbury

Cornwall	Devonshire	Dorsetshire	Hampshire
Glamorganshire	Gloucestershire	Monmouthshire	Somerset
Scilly Isles	Wiltshire		

c) Area 3 – Birmingham

Anglesey	Brecknockshire	Caernarvonshire	Cardiganshire
Carmarthenshire	Cheshire	Denbighshire	Derbyshire
Flintshire	Herefordshire	Lancashire	Leicestershire
Lincolnshire	Merionethshire	Montgomeryshire	Nottinghamshire
Pembrokeshire	Radnorshire	Rutlandshire	Shropshire
Staffordshire	Warwickshire	Worcestershire	

d) Area 4 – York

Cumberland	Durham	Northumberland	Westmoreland	Yorkshire
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e) Area 5 – Glasgow

All of Scotland

2.1.12 The Geographical Areas

A few weeks later on 8 May 1918 these were renamed on a geographical basis, numbers 1 to 5 becoming respectively:

a) South-Eastern

It had its HQ at Covent Garden Hotel, London to control 1, 2, and 4–6 Groups, plus home defence units. From 14 April 1919 the HQ moved to 4 Thurloe Place, Kensington, London SW7, and moved again on 13 September 1919 to Hillingdon, House, Uxbridge, Middlesex.

Berkshire	Buckinghamshire	Essex	Hertfordshire
Middlesex	Kent	London	Oxfordshire
Surrey	Sussex		

plus Henlow in Bedfordshire, Martlesham Heath and Orfordness in Suffolk

b) South-Western

The HQ was at Chafyn Grove, Salisbury to control 7–11 Groups and home defence units.

Cornwall	Dorsetshire	Devonshire	Gloucestershire
Glamorganshire	Hampshire	Monmouthshire	Scilly Isles
Somerset	Wiltshire		

c) Midland

On formation, the HQ was in Birmingham, but moved to Somerset House, Clarendon Place, Leamington Spa on 20 May 1918. It controlled 12–15 Groups as well as home defence units.

Anglesey	Brecknockshire	Bedfordshire	Cambridgeshire
Caernarvonshire	Cardiganshire	Carmarthenshire	Cheshire
Denbighshire	Derbyshire	Flintshire	Herefordshire
Huntingdonshire	Lancashire	Leicestershire	Lincolnshire (South)
Merionethshire	Montgomeryshire	Norfolk (most)	Northamptonshire
Nottinghamshire	Pembrokeshire	Radnorshire	Rutlandshire
Shropshire	Staffordshire	Suffolk, (most)	Warwickshire
Worcestershire			

d) North-Eastern

The HQ was in the Racecourse Building, York, for 16–19 Groups and home defence units.

Cumberland	Durham	Lincolnshire (North)	Nottinghamshire
Northumberland	Westmoreland	Yorkshire	

e) North-Western

Its HQ was in the Adelphi Hotel, Argyle Street, Glasgow and controlled 20–23 Groups, and units in Northern Ireland. From 23 May 1919 the HQ moved temporarily to Acomb Hall, York.

2.1.13 Training

At the recently formed Air Ministry, a new post was created to deal with all questions of training policy, and became known as the Directorate of Training, initially under Brigadier-General J G Hearson. Training Division was disbanded as soon as the five commands were fully ready to take over, these then being sub-divided into operational, technical, and training groups.

2.1.14 South-Eastern Area

- a) The training element within the largest command – South-Eastern Area – had five Mobilisation Stations (two of these for Handley-Page bombers), four Training Squadron Stations (TSS), plus ten Training Depot Stations (TDS) which specialised in pilots for single-seater fighter or fighter- reconnaissance aircraft.
- b) Four American Handley-Page bomber training stations were also established in Sussex to supply the newly formed Independent Air Force in Norfolk.
- c) The command also had the largest number of schools, ranging from the Boy Mechanics School at Eastchurch, to the Marine Operational Pilots' School at Dover (St Margaret). Under this command there were three training groups, Nos.1, 2 and 3, and these were further subdivided into six wings to administer the TDSs within the command. These were: 6th, 18th, 21st, 56th, 58th and 60th Wings.

2.1.15 Pilot Training

- a) From 1917 the first stage in the training of a potential RFC pilot took place at a Cadet Brigade, such as the existing army barracks at Shorncliffe. Basic training such as drill, discipline, map reading, and physical drill were carried out here. The next stage was the preliminary training of cadet pilots at a School of Aeronautics.
- b) These schools were frequently located within a major town or city such as Cheltenham, where existing town buildings were taken over as classrooms, and the local park became an exercise area, as well as being used for hands-on practical training. At these schools new buildings were often not required, except for running sheds which were erected in the requisitioned park and used for running up aero-engines and rigging of airframes.
- c) Subjects taught at the School of Aeronautics were based partly on a continuation of the skills already obtained at the Cadet Brigade, but also included technical subjects such as engines, navigation, photography, and infantry co-operation. On completion, the pupil had acquired a good understanding of the basic principles of flight, as well as a working knowledge of navigation and engine running.
- d) Elementary flying training came next, and this was carried out at a TSS. At the end of this course, the student had graduated as Pilot Grade 'B'. After graduation, the pilot then proceeded to a specialist school to complete his training which took place at a TDS.
- e) From 1917, the main RFC/RAF instructional flying unit was the TDS, which was effectively a finishing school for qualified pilots specialising in a particular function. The majority of TDSs were the product of an amalgamation of two or more training squadrons.

- f) After many TSSs had become part of the TDS arrangement, the surviving squadrons were mainly those housed within one of the older aerodromes such as Upavon (CFS) or Wye. Specialist functions of the TDSs were as follows:

Day bombing	Night bombing	Single-seater fighter
Army fighter reconnaissance	Corps reconnaissance	Seaplanes
American units	Australian units	Handley Page (bombers)

- g) To join a new squadron, after graduation at a TDS, a pilot or observer proceeded to a Mobilisation Station. The need for TDSs and Mobilisation Stations, along with the earlier reserve squadron stations – many now redesignated as TDSs – resulted in the largest aerodrome construction programme ever seen in the United Kingdom. This expansion commenced in late 1917 as a result of the urgent requirement for new pilots on the Western Front.

2.1.16 Training Development, 1919–1920

- a) On 1 January 1920 RAF Halton was given command status, its HQ being Halton House, Halton Camp, Wendover, Buckinghamshire. The school's function was primarily concerned with non-flying activities such as technical and trade training.
- b) The RAF (Cadet) College at Cranwell had been created on 1 November 1919. Three months later it was given command status, and was then renamed RAF HQ Cranwell – later changing to RAF Cranwell. Its function was to provide basic and flying training for the future leaders of the RAF. Together with Halton, this entity would eventually become Training Command.
- c) On 15 September 1919 a new command structure was created to control all flying units operating in home waters with the Royal Navy. This was the Coastal Area, with an HQ initially at 4 Thurloe Place, Kensington, London SW7, later moving to 33–34 Tavistock Place, London WC1 on 21 June 1920. No.29 Group was initially absorbed into this command. During its early days there was much hostility from the Navy who suggested that they could perform the task adequately, and hence the RAF could be disbanded! This problem was aggravated as the RAF was also responsible for aircraft based on ships. A further HQ move took place in January 1931, when the destination was Lee-on-Solent, Hampshire.
- d) There were a series of structural changes within the command, all of which took place in 1919. The North-Eastern Area was absorbed into the North-Western Area on 1 January. On 20 September, the South-Eastern and South-Western Areas were combined to form the Southern Area. Finally the Midland Area was absorbed into the extended North-Western Area and the new combination was renamed Northern Area on 18 October.

2.1.17 Air Ministry Premises

- a) In accordance with War Cabinet minutes of 4 December 1918, it was decreed that all hotels requisitioned during the war should be vacated. New premises had been identified in Kingsway, despite the Parliamentary Under-Secretary (Major-General Rt Hon J E B Seely) and others suggesting that offices should be nearer the other two services in Whitehall. The Air Ministry did eventually move to 2 Kingsway in 1919, and remained there as a complete unit until 1938, and in part until 1955.⁹

⁹ With the possibility of war approaching the operational staff were evacuated to the new West Wing of the Public Offices (now the Treasury Building) at the corner of Whitehall and Parliament Square

- b) Although a single facade, the building is actually a block of interconnecting buildings consisting of Empire, India, and Canada Houses, but when the complex was taken over by the Air Ministry the three units were considered as being a single building. In 1921 a decision was taken that the name Empire House should be removed from the building, and instead it should be called Adastral House which it became in 1922.



Plate 6: The second 'Adastral House' located at 2 Kingsway.

Photo: 18-09-06

2.2 – The Dormant Phase, 1920–1934

2.2.1 Post War Decline

- a) From 1919 the majority of redundant military aerodromes were being placed into the care of the RAF Disposal Committee, who were engaged in returning the land back to the pre-WWI landlords as surplus to Air Ministry requirements. Against this background of wholesale disposal, disarmament, and reconstruction came the Ten Year Rule.
- b) This was laid down in August 1919, when Lloyd George's War Cabinet decided that *'it should be assumed, for framing revised estimates, that the British Empire will not be engaged in any great war during the next ten years'*. It made perfect sense at the time as Germany, under Clause IV of the Armistice agreement, had by now begun to surrender the majority of its serviceable fighter and bomber aircraft.¹⁰ Furthermore, the Allies had occupied the Rhineland (Germany west of the Rhine).
- c) On 11 December 1919, Air Chief Marshall Sir Hugh Trenchard presented his White Paper outlining the form that the new service in post-war Britain should take, and the duties it should perform. Only 25½ squadrons were to be retained, of these he had decided to base 19 overseas, with Egypt having seven, India with eight, and three squadrons located in Mesopotamia.

¹⁰ Hooton, p. 18

Trenchard was also determined to create a ‘corps d’elite’ of regular officers and airmen, trained from the beginning in RAF thinking and method.

- d) As a result, the Officer Cadet College formed at Cranwell, which recruited the best that British schools could produce, and a centralised apprentice school was established at Halton Park. Here, boys with a flare for technical know-how, could receive first-class instruction and qualify as aero-mechanics and junior NCOs.¹¹ Between 1918 and 1921, the main project for the Air Ministry Works department was that of planning, layout, and design of permanent buildings for Halton Park. In contrast to this, the college at Cranwell was largely based around the existing buildings erected by the Admiralty between 1917 and 1918.
- e) To control all UK military flying training, the Inland Area was formed on 1 April 1920 out of Northern Area and Southern Area Commands. The headquarters was established at Hillingdon House, Uxbridge, while Henlow became the Inland Area Aircraft Depot.
- f) Meanwhile, under Article 198 of the Treaty of Versailles, a set of rules had been drawn up dealing with German aviation, intended to deprive Germany of military air power.¹² These were known as ‘The Nine Rules’. Very few European nations held air forces of any significance except France, hence that country became the one to measure Britain’s air capability against. Balfour’s report, issued on 29 May 1922, expressed concerns over the possibility of French aggression, and argued that the RAF should be expanded so that it could defend the UK and mount a counter-offensive. As a result Lloyd George’s Coalition Government announced the 23-Squadron Scheme to Parliament on 3 August 1922.
- g) Following approval of the 23-Squadron Scheme, the Home Defence Scheme was formulated under Trenchard’s planned force of 14 squadrons of bombers, and nine of fighters. The re-formation of many squadrons originating from WWI was going to be phased over a period of four years, to allow time for aircraft manufacturers to develop new aircraft; also for the recruitment of more personnel into the RAF, and for the modernisation of the RAF station fabric.
- h) When Lloyd George had announced that the Government had approved Air Ministry plans for a force of 500 aircraft in August, a joint sub-committee was set up under Air Commodore J M Steel and Colonel W H Bartholomew. The objective was to study air defence based on the nine fighter squadrons proposed by the Government. Brook-Popham and Philip Game worked out the terms for the gradual expansion of the RAF at Home.¹³ The Steel-Bartholomew Committee reported in April 1923 that, ‘*even if up to full strength – which they were not – our defences would be totally inadequate*’. The committee therefore, proposed its plan which followed very closely on the lines of General Ashmore’s WWI defence organisation. This primarily consisted of a defensive ring of RAF fighter stations around the capital, some 15 miles deep and called the Air Fighting Zone.

¹¹ Joubert, p.70-72

¹² *The Treaty of Versailles*. The main provisions were: (1) Covenant of the League of Nations. (2) Germany surrendered her Colonies, Alsace-Lorraine, part of the Posen, Danzig, Memel, the Saar Basin & Schleswig (subject to a plebiscite). (3) The left bank of the Rhine was demilitarised and occupied with the bridgeheads by the Allies for 15 years, and a zone 50 kilometres deep on the right bank was demilitarised. (4) Germany was prohibited from having an air force, had a limited navy and an army made up of volunteers not exceeding 100, 000 men. (5) Germany was made liable to reparations. (6) Austria, Czechoslovakia and Poland were recognised.

¹³ Boyle, p.494

- i) This was based on eight sectors arranged as an inverted 'L' around London, each manned by a fighter squadron. Inner and outer defensive belts called Artillery Zones were also to be provided for the defence of London with anti-aircraft guns. An early warning system consisted of an outer ring around the capital called the Observer Posts Belt, and a network of sound locators was to be arranged around along the coast.
- j) The Committee of Imperial Defence (CID) accepted the Steel-Bartholomew Committee's strategic report, and the Cabinet decided that the Air Ministry should be responsible for the anti-aircraft defence of the country.¹⁴ In order to implement the Steel-Bartholomew plan, another committee was set up in 1924 under Major General C F Romer, to study the command structure and communications that were required to carry it out.
- k) As a result of much inter-service argument throughout 1922, Prime Minister Bonar Law (Conservative Government) had decided that the future of the RAF should be debated at length by a sub-committee of the CID under the chairmanship of 4th Lord Salisbury (J E H Gascoyne-Cecil, 1861–1947). The appointment of Salisbury's Committee was announced in Parliament on 5 March 1923.
- l) The committee met several times between March and October to consider three main issues:
 - The relationship between the navy and the RAF with regard to the navy having complete control of any aircraft detailed to work with them
 - The relationship between the RAF and the army
 - The strength of the RAF for home and imperial defence.¹⁵

2.2.2 Partial Acceleration

- a) Meanwhile, on 9 January 1923 the Reparations Commission declared Germany in default on deliveries of coal, and as a result the new Government of Prime Minister, Raymond Poincare, in an attempt to enforce the payment, sent in troops across the Rhine to occupy the Ruhr basin. The French Rhineland Army supported by 20 squadrons, a Belgian division, and French colonial 'black' soldiers (Moroccan Spahis) was as large as the German Army.¹⁶ The British Government made no attempt to intervene; the British Zone of occupation in the Rhineland lay between the French Zone and the Ruhr, but French troop trains were permitted to cross it.¹⁷ The British Government, alarmed at a possible clash with the French over the Ruhr, decided that a Home Defence Air Force of sufficient strength was required to protect against an air attack by the strongest air force (the Armée de l'Air) within striking distance of this country.
- b) The Cabinet therefore approved an expansion scheme to increase the strength of the RAF to that of the nearest potential enemy. Prime Minister Baldwin, who had just replaced Bonar Law, therefore, announced in Parliament on 20 June 1923, that the strength of the RAF would now be increased to 52 fighter and bomber squadrons (52-Squadron Scheme).

¹⁴ The committee was first established in 1902 on a temporary basis to advise the PM, as a result of the Boer War and the need to plan and co-ordinate the Empire's defence forces. The CID was established permanently in 1904, as a small flexible advisory committee for the PM. Members were cabinet ministers, concerned with defence, military leaders and key civil servants.

¹⁵ Reader, p. 98-109

¹⁶ Hooton, p.38-39

¹⁷ Mowat, p.158

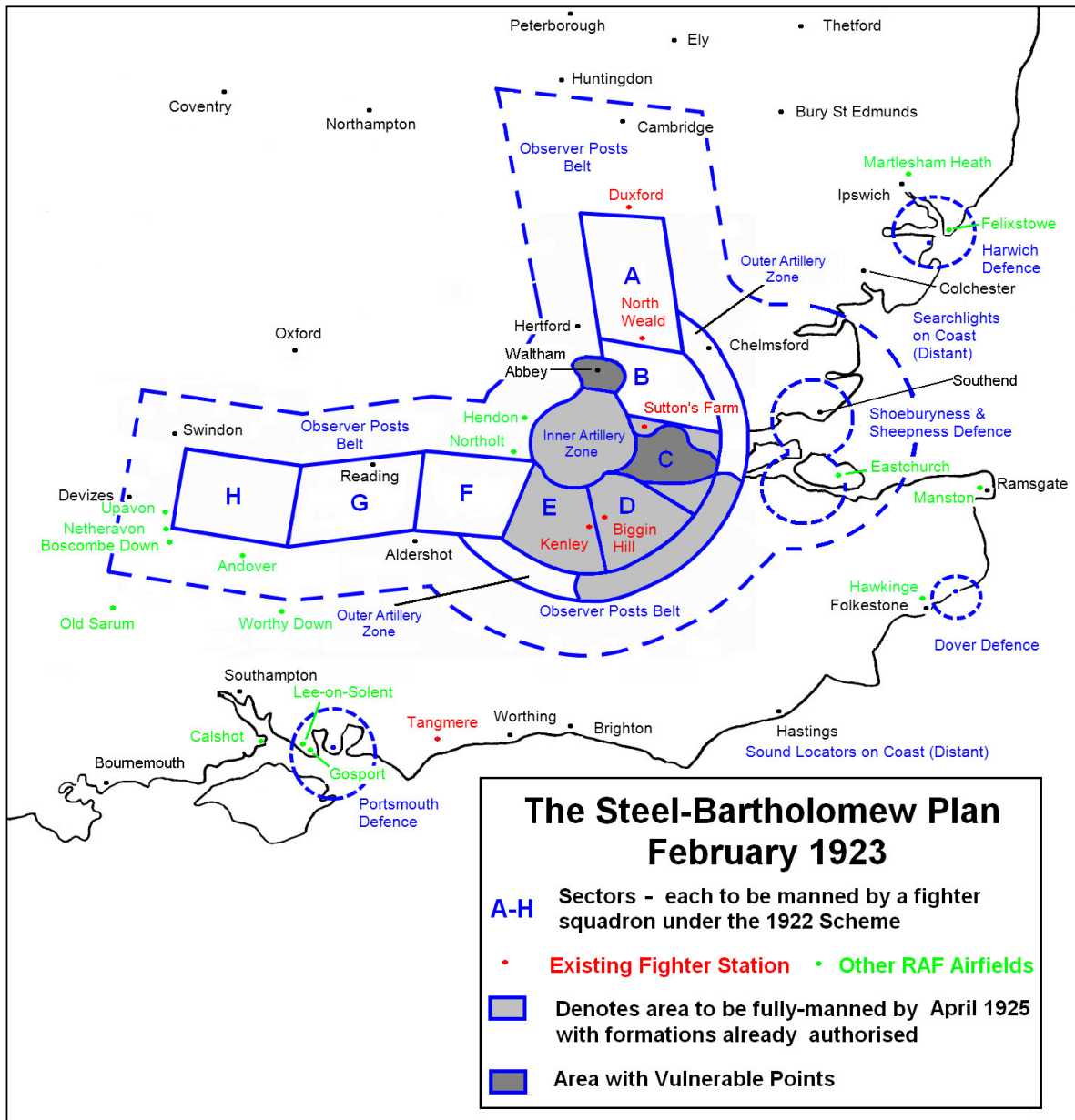


Fig. 4: The Steel-Bartholomew Plan

- c) The Steel-Bartholomew Scheme was extended with another three sectors (making a total of 11), and sites in Norfolk, Oxfordshire, Gloucestershire, and Wiltshire were under investigation for new bomber stations.
- d) The Salisbury Committee had recommended that the Air Ministry should be authorised to buy the land for permanent RAF stations and steps were immediately taken to survey ex-WWI aerodromes. Between 1923 and 1924 many sites were found for possible reconstruction.
- e) In April 1918 landowners who had owned land on aerodromes not on the permanent list had had their areas returned on the condition that it might be required again within the next 25 years as a permanent RAF aerodrome. This made the task had of requisitioning much simpler.
- f) With regard to the chosen sites, negotiations took place from 1924 to 1927 between the Air Ministry and various solicitors acting for large numbers of landlords in respect of the

Ministry's purchase of land, and the closing of rights of way across the proposed aerodromes. Other complications included sewer and power cable easements over private land, mineral rights, and other wayleaves.

- g) From a command perspective the early 1920s represented a period of being very 'top heavy' in that there was very little to control! Five years were to elapse before there were any significant increases. Following a major restructuring in 1925, a further seven years elapsed before any further changes took place. The first reorganisation was instigated by the findings of the 1923 Salisbury Committee, and was intended primarily to create a more efficient and appropriate organisation.
- h) Leading up to this proposed increase in RAF expansion during November 1923, Trenchard had requested that under the 52-Squadron Scheme, bomber squadrons should outnumber fighter squadrons by more than two to one. He also proposed a mixture of regular personnel, auxiliaries, and special reserve units.¹⁸ New bomber stations were to be built in a cluster based in Oxfordshire. This was to consist of five stations, for a total of eight regular bomber squadrons, with provision for a further six auxiliary squadrons (in the event of another war). Eventually Bicester and Upper Heyford were chosen for redevelopment, while elsewhere sites for two modern fighter stations were found at North Weald and Sutton's Farm (Hornchurch) within the Air Fighting Zone.
- i) In addition to the few designs carried out under the Home Defence Scheme (mainly of married quarters and barrack blocks), a start was also made by the Air Ministry Works and Buildings department on the design of a complete range of new technical and domestic buildings. This included a semi-protected design for a Sector Operations Block for fighter stations, and a similar one for bomber stations.
- j) Germany returned to the international stage with the signing of the Treaty of Locarno in London on 1 December 1925.¹⁹ By this treaty Belgium, the eastern frontiers of France, and the western frontiers of Germany, were guaranteed against German or French invasion by the Governments of Great Britain, Italy, France, Germany and Belgium.²⁰

2.2.3 The Air Defences of Great Britain

- a) The home defence arm of the RAF had been reorganised within Inland Area into a new formation on 1 January 1925, when the Air Defences of Great Britain (ADGB) was introduced under the command of Air Marshall Sir John Salmond as Air Officer Commanding-in-Chief ADGB.²¹ Its HQ was initially at the Air Ministry itself, 18 months later moving to Hillingdon House, Uxbridge, Middlesex – at which point the word 'Defences' changed to 'Defence'.
- b) Its function was to control all home-based bomber and fighter squadrons which were not allocated to maritime activities. In support of this function, Henlow became the Inland Area Aircraft Depot. Previously the senior officer in an area had been called the General Officer Commanding (GOC), later changing to Air Officer Commanding. The new chief of the ADGB introduced the term Air Officer Commanding in Chief (AOC-in-C).

¹⁸ AIR 19/91

¹⁹ Taylor, p.221 puts the date as 1 December but Hirst suggests it was 16 October.

²⁰ Hirst, p.61

²¹ Boyle, p. 517

- c) On 14 May 1925, HQ Superintendent RAF Reserve, formed one year previous, became the Special Reserve and Auxiliary Air Force Command; its HQ was at 145 Sloane Street, Sloane Square, London SW1, and controlled the aforementioned units. On 18 July 1927 it reverted back to group status within the ADGB, under the name Air Defence Group.

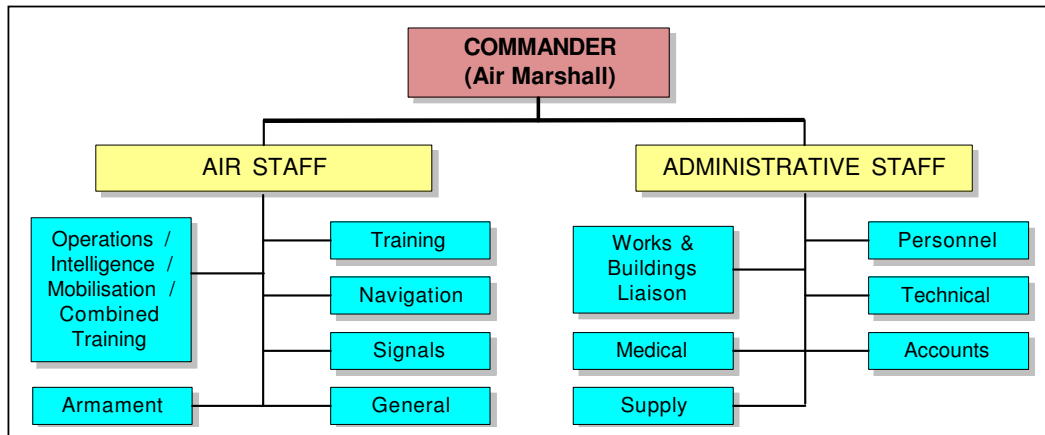


Fig. 5: ADGB HQ Structure, 1926

2.2.4 Deceleration

- a) On 1 April 1926, the Inland Area comprised:

- No.21 Group, (*West Drayton*)

Stores and Repair Depots: *West Drayton, Altrincham, Ascot, Henlow, Ickenham, Kidbrooke, Milton and Shrewsbury*

Experimental Establishment: *Martlesham*

Men's Training Establishment: *Manston*

Communication Squadron: *Hendon (later)*

- No.22 Group, (*Farnborough*)

Army Co-op Units: *Farnborough, Catterick, Odiham and Old Sarum*

School of Army Co-operation: *Old Sarum*

School of Photography: *Farnborough*

School of Balloon Training: *Larkhill*

Electrical and Wireless School: *Flowerdown*

RAF Depot: *Uxbridge*

Record Office: *Ruislip*

- No.23 Group, (*Spitalgate*)

Flying Training Schools: *Spitalgate, Digby, Sealand and Wittering*

Armament and Gunnery Schools: *Eastchurch and (to be allocated in Essex?)*

Reserve Squadrons: *Bircham Newton.*

- b) With the ratification of the Treaty of Locarno, which led to the withdrawal of the French Rhineland Army from the Ruhr basin and the first zone of the Rhineland, the allied evacuation of this area was completed by 1 February 1926. A few countries initially blocked Germany's

entry to the League of Nations, but a German seat at Geneva was secured by the autumn.²² Against this background at home, doubts were expressed at Cabinet level over the cost and justification for completing the 52-Squadron Scheme. The Committee on Air Force Expansion for Home Defence, under Lord Birkenhead (Sir F E Smith 1872–1930), convened on 11 November 1925 to examine the future of the expansion programme, now that a secure peace had been established in Europe. The committee had decided on deceleration with the result that it was announced in Parliament on 25 February 1926 that completion of the 52-Squadron Scheme was to be postponed until 1935.

- c) The deceleration policy began in 1926 and lasted until 1934. It affected many stations which had been approved for complete reconstruction, whereby some projects were abandoned altogether, while others were only partially developed. Despite this, the Air Estimates published on 12 March 1925 allotted £15 million, this being more than had been granted in any year since 1919. ADGB incorporated the Fighting Area and the Wessex Bombing Area.
- d) The Fighting Area, as laid down under the 52-Squadron Scheme, was divided into ten fighter sectors. By October 1925, the first four Royal Auxiliary Air Force squadrons had been formed:
 - No.600 City of London at Finsbury Barracks / Northolt
 - No.601 County of London at Northolt
 - No.602 City of Glasgow at Renfrew
 - No.603 City of Edinburgh at Turnhouse.
- e) On 12 April 1926, Wessex Bombing Area formed at Andover to control all bomber squadrons except two which had been sent to the Aeroplane Experimental Establishment at Martlesham Heath. Fighting Area formed at Kenley on 20 May 1926 to control fighter stations protecting the capital; within a short space of time it moved to Hillingdon House, Uxbridge.
- f) Meanwhile, a successful Repatriations Conference in The Hague during August 1929 meant that Germany was soon to be relieved of Allied control, thus completing the first stage in restoring the country on an equal footing with the rest of Europe. The French commenced their Rhineland evacuation of the remaining zones during 1930, the Allies by 1934. The area remained de-militarised until 7 March 1936 when the German army reoccupied the region and abrogated the Treaty of Locarno.²³ Full equality could not however, be achieved around the negotiation table at the Disarmament Conference, from which Germany withdrew on 14 October 1933; only a week later it left the League of Nations.²⁴
- g) The organisation of the RAF at home in 1930 comprised three main commands:
 - Air Defence of Great Britain – commanding the fighter and bomber elements (see below).
 - Inland Area – schools, store depots, and five army co-operation squadrons
 - Coastal Area – controlling all flights which served on aircraft carriers as the Fleet Air Arm, plus the flying boat squadrons, and schools concerned with sea-going aircraft.

²² Medicott, p. 214

²³ Medicott, p.350

²⁴ Taylor, p.366

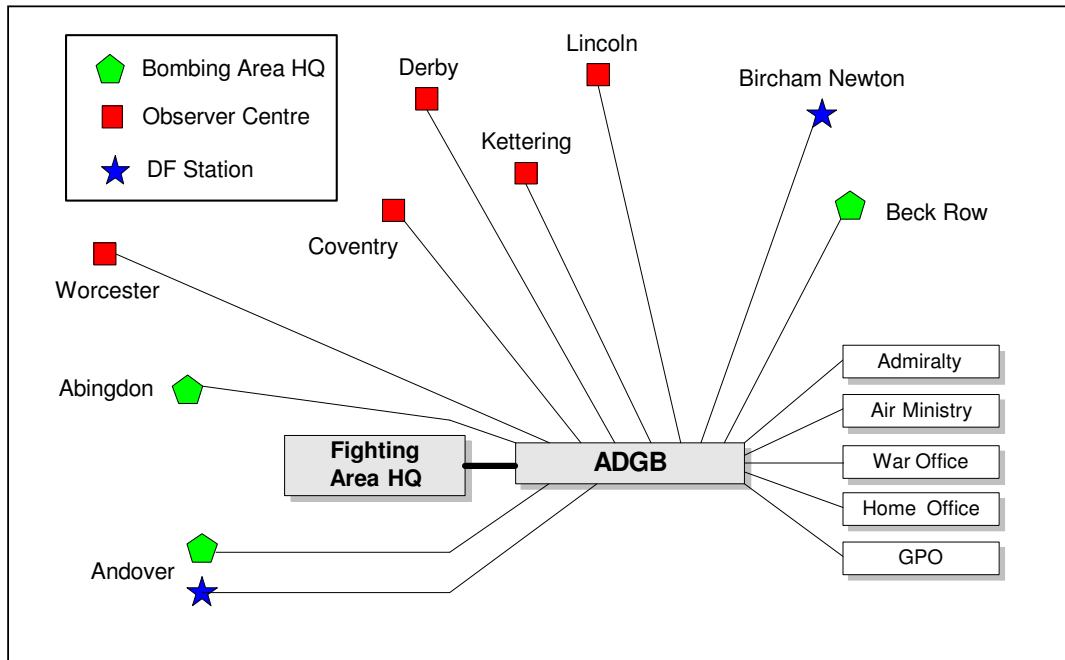


Fig. 6: Air Defence of Great Britain – Communications, 1933

- h) During 1932, two units which had been formed six years earlier within the ADGB were upgraded to command status, these being Wessex Bombing Area – with its HQ at Andover, and the Fighting Area. The HQ for the latter moved within a year from RAF Kenley to Hillingdon House, Uxbridge, Middlesex. These units, which had been formed in mid-1926 in the Inland Area, would eventually become Bomber and Fighter Command. No.1 Air Defence Group controlled the squadrons of the Auxiliary Air Force, and those squadrons which had a cadre of regular personnel and which were brought up to full strength by the Special Reserve.

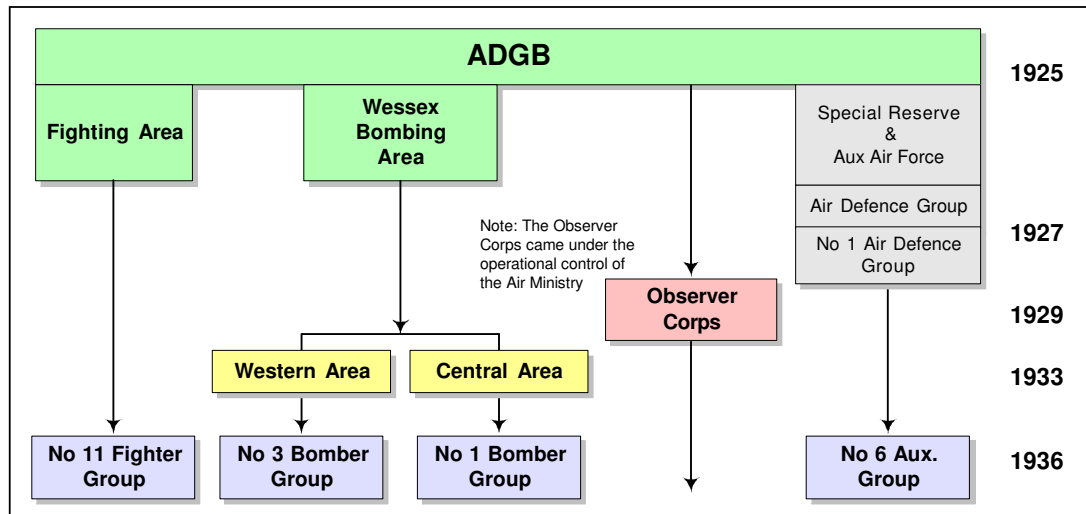


Fig. 7: The Air Defence of Great Britain, 1926–36

- i) The CID (now reviewing the rule annually) had reaffirmed the ten-year assumption in 1929, 1930 and 1931. Following the aggression of Japan in Manchuria, the Chiefs of Staff then recommended on the 23 March 1932 with the approval of the CID and the Cabinet, to abolish the 10 Year Rule.²⁵
- j) In the Air Estimates of March 1933, the RAF had a total of 75½ squadrons including 13½ Fleet Air Arm units. For home defence 42 out of the original programme of 52 squadrons and 13 of the 42 non-regular squadrons existed. On 1 October 1933, Wessex Bombing Area of ADGB was split into two more manageable units, the Western and Central Areas.
- k) Their respective headquarters remained at Andover. Three years later they would become numbers 1 and 3 Groups of Bomber Command.

2.3 – The RAF Expansion Period, 1934–1939

2.3.1 Background

- a) By the end of 1932 Germany had commenced to rearm, Hitler became Chancellor on 1 February 1933, and in the next few years equipped an air force of major proportions. In an attempt to achieve parity with Germany's increasing air strength, the British (National) Government introduced a number of schemes for the expansion of the RAF, which followed in quick succession between 1934 and 1939. Five schemes were passed by the Cabinet: 'A', 'C', 'F' 'L' and 'M'.
- b) Another three 'H', 'J' and 'K' were formulated, but never went beyond the proposal stage, although many new RAF stations proposed under these schemes did eventually become part of the next scheme to be passed by the Cabinet. Schemes 'B', 'D', 'E' and 'G' never reached the point of formal submission. This expansion, through the successful schemes, led to a large-scale rebuilding programme, with existing stations being modernised in keeping with the numerous new RAF aerodromes then being built between 1934 and 1940. This rapid expansion prompted a complete reorganisation of the command structure which began in 1936.

2.3.2 The Reorientation Scheme of 1934–1935

- a) This was an adaptation of the 52-Squadron Scheme, whereby the Air Fighting Zone was extended further north to the defended port on the Tees. This followed the earlier WWI Barrage Line of December 1916, and was aligned along the Middle Jurassic spine. It was based on the assumption of a 350 mile radius of action that might take place from bomber aircraft based in Germany (avoiding the Low Countries).
- b) The RAF in 1934 was a force of wooden biplanes; by 1939 (with a few exceptions) it was a force of metal monoplanes. To support them there had to be a vast expansion on the ground consisting of airfields and their associated buildings, as well as a vast network and supply chain of supporting organisations, including Universal Equipment Depots (UEDs), Ammunition Depots (ADs), and Aircraft Storage Units (ASUs). At the end of 1939 there were 138 airfields available for use at home (excluding civil airfields), compared with just 52 five years earlier.

²⁵ Taylor, p.228 & 364

2.3.3 The Successful Expansion Schemes – Scheme ‘A’

The first scheme, adopted in July 1934, called for a front-line strength of 1,544 aircraft (within five years), of which 1,252 were for home defence. The ADGB’s Air Fighting Zone of the old 52-Squadron Scheme was expanded from Gosport in the south, to Usworth in the north, so that for the first time since 1918, fighter squadrons were again based in the north-east.

2.3.4 Scheme ‘C’

Scheme ‘C’ replaced Scheme ‘A’ when the size of Germany’s air force became known in 1935, and came about as a result of Hitler personal statement to Sir John Simon and Mr Eden in March 1935, that the German Air Force had already reached parity with the RAF. Scheme ‘C’ was implemented on 22 May 1935 – to provide a Metropolitan Air Force of 123 squadrons with 1,500 aircraft within two years.

2.3.5 Scheme ‘F’

- a) Scheme ‘F’ came about due to further German expansion and working up to an intended 2,500 first-line aircraft by March 1939. Another catalyst was the outbreak of the Abyssinian War. It was approved in February 1936, replacing Scheme ‘C’ before it was complete, and allowed for 124 squadrons with 1,750 front-line aircraft. The programme of aircraft construction of the previous schemes was not beyond the capacity of the firms existing in the industry. Scheme ‘F’ was however, too large for these firms to undertake unaided. It was therefore decided to bring into operation a number of ‘shadow factories’.
- b) The factories in question were the large motor car plants in the Birmingham and Coventry districts, where new factories were to be erected in close proximity to the parent works (hence the term ‘shadow factory’). Later the scheme was expanded to Blackpool, Manchester and Liverpool. To cope with the increase in output from these factories, provision had to be made for the aircraft to be held in reserve. This directly led to the setting up of Aircraft Storage Units on many of the new Flying Training Schools.
- c) By the end of the year, Scheme ‘H’ was proposed, which would have increased the front-line strength at the expense of the reserves, but was soon rejected.

2.3.6 Schemes ‘L’ and ‘M’

- a) Scheme ‘J’ would have given the RAF nearly 2,400 first-line aircraft, including 900 heavy-bombers, by the summer of 1941. But this would have entailed considerable financial expenditure which was not acceptable to the Government who instructed the Air Ministry to prepare a cheaper version, which it did in the form of Scheme ‘K’.
- b) Scheme ‘K’ came before the Cabinet in March 1938, but by this time the German move into Austria had occurred, and it therefore became necessary for an accelerated programme. Scheme ‘L’ was the result, passed by the Cabinet on 27 April 1938 and this involved a programme of aircraft construction which represented the maximum output from industry within a two year period. Long before the first year had passed however, the Munich crisis occurred and Scheme ‘L’ was replaced by Scheme ‘M’. The latter was approved on 7 November 1938 for 2,550 first-line aircraft in the Metropolitan Air Force, and scheduled to be completed by 31 March 1942.

2.3.7 Home Commands

- a) Between 1 May and 10 July 1936, the Air Council reviewed the system of command and administration prevailing in Home Commands. As a result ADGB, with its sub-ordinates, Western Area, Central Area, Fighting Area, and No.1 Air Defence Group, Coastal Area and Inland Area were all disbanded. Instead, the first four new commands, each with an Air Officer Commanding-in-Chief were formed. The new functional basis of the home organisation was intended to develop streamlined efficiency.
- b) This reorganisation of 1936 produced a chain of command which went on to govern operations throughout the war. The Cabinet decided on general strategic policy with the advice of the Chiefs of Air Staff. Execution of this policy rested with the Air Council. Practical interpretation of this was a matter for the Chief of Air Staff who issued directives for the guidance of commanders.
- c) The AOC-in-C at command level used his forces in accordance with his own judgement to secure the desired results. Below the commands were the operational groups; within these were the stations (administrative function), and the associated squadrons and flights.
- d) Different commands had their distinctive variations such as the new sector organisation in Fighter Command which replaced the Air Fighting Zone. This operated below group level and controlled squadrons and flights at more than one station within the same sector. The final link in the chain of Fighter Command organisation was 'Section' identified not by numbers or letters but by a system of colours such as 'Blue Section'. These consisted of a small number of aircraft under the operational control of a section leader, and took effect as soon as the enemy had been sighted by the fighters, and finished when the battle was over, then returning to sector control.

2.3.8 Training Command

- a) Between May and July 1936, the RAF command structure was changed completely, with the creation of a number of functional commands.
- b) On its formation Training Command consisted initially of the remains of the Inland Area, which over the years had lost most of its operational component, and had become a general administrative and training function. Two months later the new command was joined by Cranwell and Halton, which were then accordingly reduced to group status.
- c) The HQ moved from Bentley Priory, Stanmore, Middlesex, to Buntingsdale Hall, Market Drayton, Shropshire on 13 July 1936, and again on 15 January 1940 to Shinfield Park, Reading. Initially the command was tasked with many of the aspects which later would be undertaken by Maintenance and Reserve Commands, and it was found difficult to integrate these functions with the more straightforward jobs of training both technical and aircrew staff.

2.3.9 Coastal Command

- a) This was the new name given to the existing Coastal Area, the HQ remaining at Lee-on-Solent, Hampshire until it moved to Northwood, Middlesex. It would continue to operate UK-based General Reconnaissance Units, though in July 1937 off-shore elements were returned to the Admiralty, Royal Naval Air Service, which would soon become the Fleet Air Arm.

2.3.10 Bomber Command

- a) The second major restructure took place on 14 July when the ADGB split into two new commands.
- b) The Central and Western Areas of the Wessex Bombing Area within the ADGB were disbanded, becoming No.1 (Bomber) and No.3 (Bomber) Groups respectively. The first HQ was at Hillingdon House, Uxbridge, Middlesex. In 1939 it controlled six groups (1 to 6), with around 500 airworthy machines; by 1945 it had expanded to twelve groups with 1,600 aircraft.

2.3.11 Fighter Command

This was born from ADGB's Fighting Area – being renamed No.11 (Fighter) Group; the HQ location remained at Bentley Priory. Initially with three geographically located Groups (11–13) it expanded to a peak of eight by 1943, as it also became responsible for the operational training of fighter crews and associated essential activities.

2.3.12 Maintenance Command

- a) This brand new unit was formed on 1 April 1938, at the Air Ministry in London. Four months later the HQ moved to RAF Andover, Hampshire, and again on 15 September 1939 to Amport House, Amport St Mary's, Andover. Its function was primarily the supply of all equipment to the RAF in the UK. Four distinct sub-groups were then set up to perform this function, these were:
 - An aircraft group comprising the equipment depots (40 Group)
 - An aircraft, mechanical transport, and marine craft group, comprising all the aircraft storage units, and a packing depot (41 Group)
 - An ammunition and fuel group comprising the ammunition depots, ammunition parks, fuel and oil reserves, and distributing depots (42 Group)
 - A repair and salvage group, comprising the aircraft depots and any other workshop units which might be necessary (43 Group).
- b) Though primarily a ground based command it also assumed control of the sixteen Ferry Pilot Pools.

2.3.13 Reserve Command

- a) This was a short-lived unit formed at RAF Hendon in London, on 1 February 1939. Details of headquarter locations conflict – one source suggests a move after seven months to Wantage Hall, Reading University, Berkshire (4 September 1939), followed by a proposed but cancelled move to White Waltham. Another claims a prompt relocation to White Waltham, Berkshire in early 1939. Its function was related to elementary aircrew training, consisting of Initial Training Wings, Elementary Flying Training Schools, and Air Observer Navigation Schools.
- b) Three groups (50, 51 and 54) were allocated, but due to a very substantial increase in flying training requirements, the organisation was absorbed into Flying Training Command on 27 May 1940. Reserve Command did however experience a new lease of life following the end of WWII.

2.3.14 Balloon Command

- a) Barrage balloons had been used with some degree of success in WWI, with the advent of the British Balloon Apron which was first tried in the London's East End during early 1918. Proposed by Major-General E B Ashmore, it consisted of a curtain of 40 streamers hanging from a series of five Caquot balloons, spaced at 500 metre intervals. The balloons were anchored to the ground at three points. Similar systems were soon in use at Plumstead, Ilford, Lewisham, Wanstead, and Tottenham.
- b) Over 3,500 personnel were needed to operate the system which, owing to the weight of the curtains, put not only enemy aircraft in danger, but anyone below the curtain itself.
- c) The advantage of the curtains was that they caused raiders to operate at great height, which made interception by the LADA squadrons much easier. All work on balloons ceased in 1918, however a small research establishment continued the work, and a decision was made to establish a London barrage, with the provinces left unprotected until more experience was gained.
- d) No.30 Balloon Group (London) was originally part of Fighter Command. With the strong possibility of war, and the realisation that the rest of Britain would require protection, a two fold overall increase in the system was forecast. This would include three times as many centres, plus a four-fold increase in the number of squadrons. It was proposed to form three new groups, and 17 centres, and as this organisation would be impossible for Fighter Command to handle, then the solution would be to form a new command. The planned extension of the barrage system is shown in this table.

Table 1 – Proposed Barrage Balloon Organisation – Pre WWII			
Area Served	Centre	Sqns	Notes
London	Chigwell	3	Each squadron has five flights, with nine balloons per flight
	Hook	2	
	Kidbrooke	3	
	Stanmore	2	
Liverpool, Birkenhead,	Liverpool	5	Most squadrons have three or four flights. A few may have only two. All flights have eight balloons
Glasgow and District	Glasgow	3	
Manchester and District	Manchester	3	
Sheffield and District	Sheffield	3	
Tyne and Tees	Newcastle	3	
Humber and District	Hull	3	
Birmingham, Coventry, Derby	Birmingham	8	
Bristol, Avonmouth	Bristol,	3	
Newport, Cardiff, Swansea	Cardiff	1	
Southampton, Portsmouth	Southampton	4	
Plymouth, Devonport	Plymouth	2	

- e) Balloon Command was formed 1 November 1938 to control all UK based barrage balloon units, these being Nos.30 to 34 Groups. Not all groups were active throughout WWII. These were:
- 30 Group: London
 - 31 Group: Birmingham
 - 32 Group: Romsey
 - 33 Group: Sheffield
 - 34 Group: Edinburgh.
- f) The initial HQ was at Kelvin House, Cleveland Street, London W1; then moving the following year to Manor House, Station Road, Stanmore, Middlesex on 1 September.



Plate 7: Kelvin House, the former HQ of Balloon Command.
Cleveland Street, London W1. Photo: 18-09-06

- g) The balloons were operated by a crew of two Corporals and ten airmen on a round-the-clock shift basis. In 1940 it was soon decided that balloons could be operated by WAAF's thus releasing men for active service in other areas. A balloon training unit was set up and until closure in 1943 it had trained over 10, 000 RAF and WAAF balloon operators, and some 12, 000 operator drivers.
- h) The work was not without its dangers; during July 1940, some 174 balloons were destroyed by lightning, resulting in the sudden drop of the steel hawser onto anyone who may be standing nearby. Under normal circumstances the balloons would have been lowered significantly, but as enemy action was imminent they were maintained at operational height.

- i) By the end of 1940 the system was fully operational with five groups. These were:

Table 2 – Barrage Balloon Organisation, 1940				
Group	HQ	Centres	Sites	Flights
30	London	Chigwell, Hook, Kidbrooke, Stanmore	14	65
31	Birmingham	Alvaston, Fazakerley, Manchester, Sutton Coldfield, Warrington, Wythall	16	69
32	Ramsey	Pucklechurch, Collaton Cross, Titchfield	17	61
33	Sheffield	Newcastle, Sheffield, Sutton on Hull	7	33
34	Edinburgh	Bishopbriggs, Firth of Forth, Lyness	11	41

- j) With its function clearly no longer required the command disbanded on 15 June 1945 and was replaced by Balloon Wing.

2.3.15 A Permanent Home for the Air Ministry

- a) A move to Whitehall was always on the cards but because of limited space the only way this could happen would be the redevelopment of Whitehall Gardens, and the demolition of a number of historic houses. The construction of a new building was accordingly approved by the Cabinet during February 1937, the successful architect being E Vincent Harris. The houses were removed the following year but five rooms from Pembroke House, Cromwell House and Cadogan House were dismantled for reconstruction within the new building including the old cellar that once belonged to Whitehall Palace.



Plate 8: The south elevation of the MoD Building
The RNAS/Fleet Air Arm memorial is in the foreground. Photo: 18-09-06

- b) Construction did not get very far due to the building restrictions of WWII and the only parts to be completed were two underground citadels.

2.4 – World War Two, 1939–1945

2.4.1 Air Ministry Relocation

With the strong likelihood of war with Germany, all Air Ministry operational staff were moved from Adastral House, Kingsway to be closer to operational staff from the other services – the Royal Navy in the Admiralty, and the Army in the War Office. This was deemed necessary to advise the War Cabinet on the conduct and direction of the war. Accommodation was provided in the west wing of the New Public Offices (now the Treasury Building) at the corner of Whitehall and Parliament Square.

2.4.2 Bomber Command

- a) Two days before Britain and France declared war on Germany, No.1 (Bomber) Group with ten squadrons of Fairey Battle light bombers moved to France, and together with two Blenheim squadrons from 2 Group (who would remain based in England) became the Advanced Air Striking Force.
- b) At home, Bomber Command was left with an organisation which consisted of the greater part of 2 Group, plus four other units. The complete structure was:
 - HQ Bomber Command:
 - 2 Group – It was an all Bristol Blenheim group with six operational and one non-operational squadron. Group HQ: Wyton
 - 3 Group – An all Vickers Wellington group with six operational and two non-operational squadrons. Group HQ: Mildenhall
 - 4 Group – Based in Yorkshire it was an all Armstrong-Whitworth Whitley group with five operational and one non-operational squadron. Group HQ: Linton-on-Ouse
 - 5 Group: – An all Handley Page Hampden group with six operational and one non-operational squadron. Group HQ: St Vincents, Grantham
 - 6 Group – consisted of Group Pool / Reserve squadrons to supply the above, and therefore used all types of aircraft within fourteen squadrons. Group HQ was at Tavistock Place, London – later at Old Catton, Norwich.
- c) Its organisation was therefore based on geographically located groups, each with an HQ displaced from an airfield, typically to the grounds of a stately home. Each group was subdivided into a number of parent stations with one or more satellites.
- d) No.1 Group was briefly restored at Benson, only to be disbanded after three months, but reformed again in June 1940 equipped with Wellingtons.
- e) By 1942, No.3 Group was re-equipping with the four-engined Stirlings, 4 Group saw the introduction of the Halifax, and after a brief period with the ill fated Manchester, the first Lancasters began service with 5 Group.
- f) Table 3 shows the number of airfields and operational squadrons associated with each group at four periods during WWII.

Table 3 – Bomber Command, 1939–45																	
'A' – Airfields, 'S' – Squadrons																	
	1 Gp.		2 Gp.		3 Gp.		4 Gp.		5 Gp.		6 Gp.		8 Gp.		100 Gp.		Totals
Period	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A/S
Sep 39			4	7	7	8	3	6	6	8	7	14					27/43
Jan 42	6	10	5	9	8	14	9	12	8	12			1	1			37/58
Mar 43	8	10	7	10	9	10	9	11	8	10	6	9	5	5			52/65
Apr 45	10	14			9	11	10	11	11	11	7	14	8	19	8	13	63/93

- g) The total number of squadrons equipped with four-engined heavy bombers, and the aircraft and crew availability is shown below.

Period	Total Sqns	A/c with crew
Jan 1942	9	108
Dec 1942	26	264
Oct 1943	48	710
May 1944	67	914
Apr 1945	80	1,398

- h) By early 1943 the principal operational groups had become almost unmanageable, as they now controlled significantly larger numbers of airfields and squadrons. This prompted the creation of an intermediate structure which improved communications and general efficiency, from both maintenance and operational aspects. The 'Base' system was applied to Nos.1, 3, 4, 5 and 6 Groups from March 1943. Effectively three airfields constituted a 'Base', with one as the Base station (being typically permanent expansion period airfields). Group HQ would now communicate directly with the three to six bases within its network, and these stations would be responsible for controlling their two satellites.

2.4.3 Fighter Command – the Battle of Britain

- a) After the evacuation of Dunkirk during May and June 1940, came the Battle of Britain. At the beginning of June there was just one fighter station further west than Middle Wallop, in Hampshire, but two months later there were seven. At the time of Dunkirk there were only three fighter groups (11, 12 and 13). By the opening of the battle in mid-August 10 Group in the south-west was fully operational and two others for the defence of the north-west and northern Scotland (9 and 14 respectively) were in the process of being set up.
- b) By 1942 the squadrons had turned from a largely defensive role to one involving a very high element of offensive activities. Unable to protect Bomber Command missions, due to the short range of the aircraft, the command went into a slight decline until it lost its status in November 1943. It was then renamed 'Air Defence of Great Britain' – for the second time in its history.
- c) For the next ten months much of the work performed by ADGB was in support of the Invasion of Europe, but with much of France then in Allied hands and with new threats from German V-weapons, the decision was taken to reinstate the command from 16 October 1944. This again resulted in the end of the ADGB.

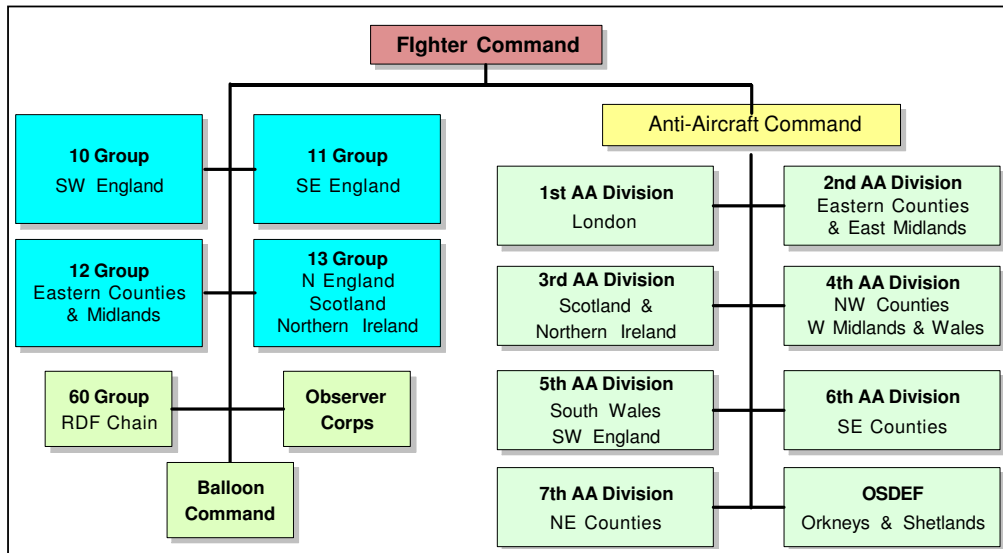


Fig. 8: Organisation of Air Defences, August 1940

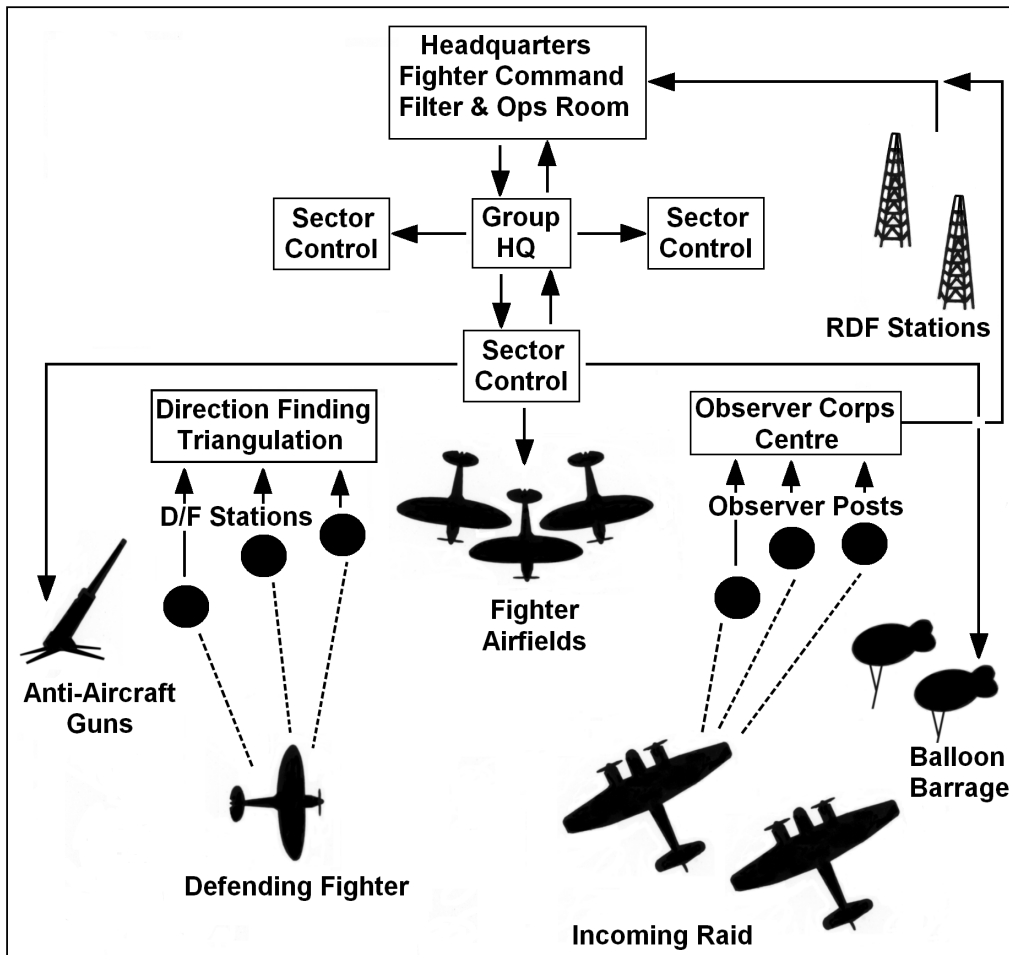


Fig. 9: Fighter Command Group and Sector Layout.

Note: with the exception of 11 Group, all Fighter groups were provided with their own Filter Rooms.
The Filter Room at Stanmore was taken over by 11 Group in 1941.

- d) The number of combat squadrons at four periods during WWII is shown below:

Period	Total Sqns	UK based	Overseas based
Sept 1939	55	41	14
Dec 1941	156	114	42
Dec 1943	161	83	78
Mar 1945	160	46	114

- e) On 15 November 1943 the 'Allied Expeditionary Air Forces' was created at Kestrel Grove, Hive Road, Stanmore in Middlesex. It controlled the following units:
- Air Defence of Great Britain – Fighting elements
 - 2nd Tactical Air Force – effectively No.2 Group Bomber Command
 - No.38 Group – Airborne Forces
 - No.85 Group – Tactical Air Force.
- f) On 15 October 1944 it was renamed RAF Element Supreme HQ Allied Expeditionary Air Forces.
- g) It is of interest that Bomber, Fighter, and Coastal Commands all developed specialised groups within their structure to enable personnel fresh from Training Command to become proficient in the requirements for war. These groups were known as Operational Training Units.

2.4.4 Operational Training Units

- a) Prior to 1938 the established method of producing a bomber crew was on a totally unstructured basis. Pilots and observers etc who had completed their training would be posted to operational bomber squadrons, where they would mingle with established crews and stand in for regular members from time to time in order to gain air experience.
- b) During 1939 a number of relatively inexperienced operational squadrons had been given either 'Reserve', or 'Group Pool' status. The former would only undertake operations against the enemy after further training in the UK, while the latter served to supply replacement crews to the main groups. No.6 Group was now formed to administer these two new categories.
- c) In April 1940 the Group Pools lost their 'squadron' numbers and were redesignated Operational Training Units. The emphasis was now much more crew orientated, rather than on individual members. This was partly due the decision to make 'Sergeant' the basic rank of crew members; wireless operators and air gunners now became regular, rather than part-time fliers.
- d) The training method developed in 6 Group was to initiate a course consisting of a number of pilots, observers, wireless operators (WOPs), air gunners etc, and give them an initial six week training in their own craft. During this period individuals would get to meet other course members of different trades. After an initial period, the entire intake would meet in a hangar and, after a short time, a number of crews would emerge, each having the full complement of five for a Wellington medium bomber (two pilots, observer, two air gunners, at least one of whom was a wireless operator). Several weeks of further training, now on a crew basis would complete the course, and the crews would be then despatched to operational squadrons. During these two weeks the crews would fly a number of 'operations' involving dummy raids on UK cities, and relatively safe trips to enemy occupied France. Nine OTUs were formed initially, one of which was for Polish crews flying the Fairey Battle.

- e) Heavy operational losses during the latter half of 1940 meant that more replacement crews were needed and in May 1941, 7 Group was formed controlling an additional eight OTUs. In order to speed up the process of producing new crews the OTU course was shortened from ten to eight weeks, (and to six for Whitleys); this soon led to a noticeable degradation in the quality of crews supplied to the squadrons. Certain courses were then increased to 17 weeks, however a major overhaul of the system led to a change in what constituted an ideal crew. The bottleneck in producing new crews had always been caused by the shortage of trained pilots. This was solved by the abolition of the 'second pilot' concept. The observer position was also abolished and replaced by a dedicated navigator, and a bomb aimer, the latter also being a trained air gunner. Pilot flying hours on the OTU was increased from 45 to 80.
- f) In May 1942, 6 Group was redesignated 91 Group (OTU), and would eventually control 14 airfields in an area based in west Oxfordshire and Worcestershire. No.7 Group became 92 Group (OTU), controlling a similar number of airfields most of which were situated in the rest of Oxfordshire and Buckinghamshire (seven months later 6 Group would reform as a fully Canadian operational bomber unit). Increasing demands on a rapidly growing bomber force soon need additional training resources, and in June 1942, No.93 Group (OTU) was formed to manage a smaller number of airfields mainly in Staffordshire. Some additional training was allocated to the bomber groups themselves to maintain standards. A Gunnery Flight was allocated to each group, involving 24 air gunners per course of six days duration.
- g) When the four-engined bombers came on line in 1942, it was found that further training time was necessary, and rather than increase the duration of the standard OTU course, a new strategy was employed which resulted initially in the formation of Heavy Conversion Flights. These were allocated to each operational squadron and allowed new crews fresh from the medium bomber OTU some additional training in a four-engined machine, before undertaking full operational duties.
- h) This system proved inadequate and led to the formation of the Heavy Conversion Unit (HCU). In its final form it would take a five-man crew from the OTU, and add a mid-upper gunner and a flight engineer. Each bomber group was allocated three HCU's which would be located on separate non-operational airfields within that group's geographical area. All the HCU's however eventually came under the jurisdiction of No.7 Group, which was reformed in November 1944 at St Vincents, Grantham.
- i) A surplus of aircrew in November 1943 led to the formation of Aircrew Schools, which were effectively holding units between OTUs and the HCU. They provided short courses of instruction in a variety of useful skills, including a battle course, further synthetic training, dinghy drill, and evasion procedures.
- j) The entire operational training system needed to adapt to changing requirements at very short notice. This meant that new types of schools were brought into the system as needed. The OTU status in December 1943 was:

23 Bomber OTUs	1 Light Bomber OTU
1 Mosquito Training Unit	16 Heavy Conversion Units
2 Heavy Conversion Flights	3 Lancaster Training Flights
1 SD (Radar) Flight	5 Aircrew Schools
7 Gunnery Flights	7 Defence Training Flights
1 PFF Navigation Training Unit	1 Night Bomber Tactical School
1 Central Night Vision School	1 Engine Control Demo. Unit

- k) Owing to operational requirements and a shortage of Lancasters, the HCUs tended to use war-weary Stirlings and Halifaxes as training aircraft, hence there was a further requirement to bring new crews to a level more suited to joining a front-line operational squadron. This resulted in the development of the 'Lancaster Finishing School'. In the latter half of 1944, when more Lancasters were available, they replaced the other HCU aircraft thus making the Finishing Schools redundant.
- l) During the course of WWII several OTUs were formed in Fighter, Coastal and Transport Commands. However with crew losses only a fraction compared with those of Bomber Command, there was generally no requirement to form separate training groups. The exception was 81 Group (OTU) which existed as part of Fighter Command from December 1940 until April 1943, when, much diminished in size, its units became part of 9 Group.

2.4.5 Flying Training Command

- a) A comparison with the German Air Force revealed that the RAF aircrew training scheme was woefully inadequate. Whereas a Luftwaffe pilot would receive some 20 months basic training and 250 hours flying before becoming operational, his RAF equivalent would have probably 177 hours after a mere six months basic training. Though there was no way this could be matched in the short term, it was clear that a massive increase in training requirements was urgently needed. Training Command was therefore split into two factions on May 27 1940. Flying Training Command was formed at Shinfield Park, Reading, and would be responsible for all UK based flying training. Groups under its command on that day were:

- 21 Group:
 - RAF College Cranwell
 - Service Flying Training (Pilot) Schools (SFTS) and Advanced Flying Units (AFUs) in the Midlands, Northern England and Scotland.
- 23 Group:
 - FTS (Pilot) schools and AFUs in Cotswolds, Western and Southern England
 - The Aeroplane and Armament Experimental Establishment (Martlesham Heath)
 - Central Flying School (Upavon)
 - Empire Central Flying School (Hullavington)
 - Glider Schools.
- 25 Group:
 - Manby and its Central Gunnery School
 - All armament training schools (Northern England Air Gunnery Schools, and (O)AFUs to 29 Group in July 1942)
 - No.1 Air Armament School
 - Central Navigation School (Cranage).
- 50 Group:
 - The majority of the Elementary Flying Training Schools (EFTS)
 - Air Observers Navigation Schools.
- 52 Group:
 - In planning stage but then cancelled.
- 54 Group:
 - All Initial Training Wings.

- b) Regarding pilot training the group was responsible for two types of schools, the Elementary Flying Training Schools (EFTS) were originally civilian organisations and ran six-week courses, giving a pilot 25 hours solo flying. In contrast the Service Flying Training Schools (SFTS) had longer ten-week schools, allowing between 42 and 49 hours of solo, and aimed to produce pilots who were 'squadron ready'. Prior to 1940 they also trained navy and army pilots, and after 1941 courses were produced for glider pilots.
- c) Training Estimates at March 1940 (including overseas units) were for:
- | | |
|---------------------------------------|------------------------------------|
| 60 Elementary Flying Training Schools | 60 Service Flying Training Schools |
| 40 Air Observer Navigation Schools | 27 Bombing and Gunnery Schools |
| 6 Air Navigation Schools | 3 Army Co-operation Schools |
| 3 Flying Instructors Schools | 2 General Reconnaissance Schools |
| 2 Torpedo Training Schools | |
- d) These figures were based on the need to train 3,000 aircrew per year for Fighter Command, 4,000 for Bomber, and 1,600 for Coastal Command.
- e) Fourteen Service Flying Training Schools were operational in May 1940. In numerical order these were:
- | | | |
|-------------------------|----------------------------|-----------------------|
| Netheravon (1 SFTS) | Brize Norton (2 SFTS) | South Cerney (3 SFTS) |
| Sealand (5 SFTS) | Little Rissington (6 SFTS) | Peterborough (7 SFTS) |
| Montrose (8 SFTS) | Hullavington (9 SFTS) | Ternhill (10 SFTS) |
| Shawbury (11 SFTS) | Grantham (12 SFTS) | Cranfield (14 SFTS) |
| Middle Wallop (15 SFTS) | Cranwell (College SFTS) | |
- f) The aircraft used were mainly Harts, Harvards, Battles, Ansons and Oxfords. A typical course could handle 72 pupils.

2.4.6 Technical Training Command

- a) This assumed control of Nos.20, 24 and 26 Groups. Its HQ was at Shinfield Park, Reading, Berkshire. In August 1943 No.22 Group was added, and on 29 October 1945 the HQ moved to Brampton Grange, Huntingdonshire.
- b) The functions of the Group were:
- 20 Group – Schools of Technical Training and Recruits Receiving Centres
 - 22 and 24 Groups – Technical Training
 - 26 Group – Electrical and Wireless Schools, Special Wireless School (Yatesbury).
- c) In 1940 the three initial groups were organised accordingly:

No.20 (Training) Group (Market Drayton):

- Schools of Technical Training: Blackpool, Cosford, Hednesford, Morcambe, Kirkham, Weeton
- Recruits Centres: Bridgnorth, Morcambe, Padgate, Saughall Massie, Stockport
- Equipment Officers Schools: Bridgnorth, Little Rissington
- RAF Station: Loughborough.

No.24 (Training) Group (Halton):

- Schools of Technical Training: *Halton, St Athan, Locking, Gloucester, Hereford, Melksham (added later)*
- Specialised Training Schools:
 - School of Photography: *Farnborough*
 - School of Administration: *Gerrards Cross*
 - School of Cookery: *Halton*
 - Anti-Gas School: *Rollestone*
 - School of Aeronautical Engineering (Officers): *Henlow*
 - Equipment Training School (Officers): *Little Rissington*
 - School of PT: *Uxbridge*
 - RAF Service Police School and HQ: *Uxbridge*.
- Medical Units:
 - Princess Mary's Hospital: *Halton*
 - RAF Institute of Pathology and Tropical Medicine: *Halton*
 - Medical Training Depot: *Sidmouth?*
 - RAF Hospital: *Littleport and Ely*
 - Central Medical Establishment: *London*
 - WAAF Hospital: *Uxbridge*
 - RAF Officers' Convalescent Hospital: *Torquay*
 - RAF Neurological Hospital: *Matlock*.
- Personnel Units:
 - Recruits Centres: *Uxbridge, Cardington, Padgate, Morecambe, Manston*
 - WAAF Depot: *West Drayton*
 - Personnel Despatch Centre: *Uxbridge*
 - RAF Embarkation Staff: *Barry and Newport*.
- Other Units:
 - No.1 Camouflage Unit: *Baginton*
 - Aeroplane and Armament Experimental Unit: *Boscombe Down*
 - Blind Approach Development Unit: *Boscombe Down*
 - Inspectorate of Recruiting: *London*
 - Records Office: *Ruislip*
 - RAF Central Band
 - Miscellaneous Technical Training Unit: *Henlow*
 - Central Trade Test Board: *Henlow*
 - Recruits Training Pools: *Manston and Upwood*.
- Recruits Sub-Depots were added later at the following RAF Stations: *Dishforth, Driffild, Fittingley, Linton-on-Ouse, Scampton, South Cerney, Upwood, Usworth*

No.26 (Signals) Group (Langley Hall):

- Electrical and Wireless Schools: *Cranwell, Yatesbury, Calne added later*
- Air Ministry Codes Cypher School: *Oxford*
- RAF Central Teleprinter Exchange: *Leighton Buzzard*
- RAF Inter-Command WT Receiving Station: *Leighton Buzzard*
- RAF Station: *Harrogate*
- Supplementary Wireless Schools: *Hamble and Prestwick*
- RAF Unit: *Worcester*
- Signals Depot: *White Waltham (1940).*

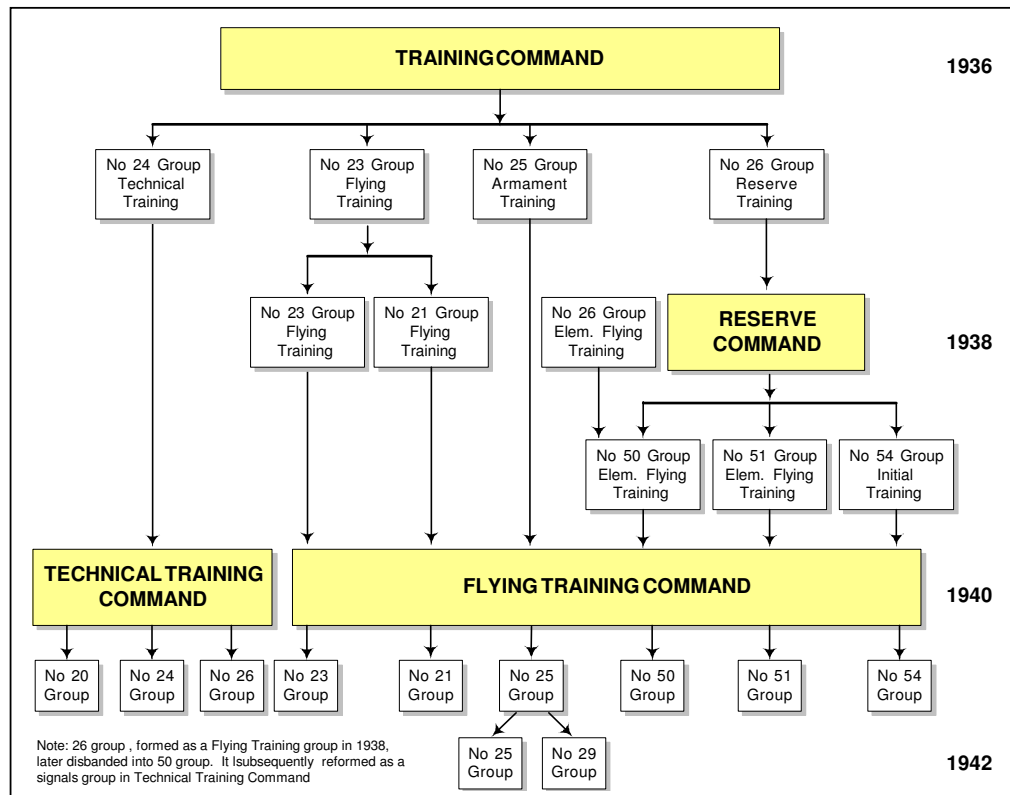


Fig. 10: The Emergence of Technical and Flying Training Commands

2.4.7 Army Co-operation Command

- a) On 24 June 1940, No.22 Group – which dated back to 1918 under various guises – became an independent group with command status. With a headquarters at Farnborough Secondary School, Hampshire, it was responsible for Army Co-operation duties. On 1 October 1940 it consisted of the following units:

- Training and Development Stations:

<i>Andover</i>	<i>Cardiff</i>	<i>Castle Bromwich</i>	<i>Christchurch</i>
<i>Farnborough</i>	<i>Gatwick</i>	<i>Grangemouth</i>	<i>Odiham</i>
<i>Old Sarum</i>	<i>Ringway</i>		

- Operational Squadron Airfields, (in addition to above):

<i>Bury St Edmunds</i>	<i>Cambridge</i>	<i>Firbeck</i>	<i>Hatfield</i>
<i>High Post</i>	<i>Hooton Park</i>	<i>Inverness</i>	<i>Tilshead</i>
<i>Weston Zoyland</i>	<i>York</i>		

- Detachment Stations, (in addition to above):

<i>Aberffraw</i>	<i>Aberporth</i>	<i>Carew Cheriton</i>	<i>Cleave</i>
<i>Kidsdale</i>	<i>Manorbier</i>	<i>Morfa Towyn</i>	<i>Squires Gate</i>
<i>West Freugh</i>			

- Schools:

Andover *Farnborough* *Old Sarum*

- Misc. Units:

Larkhill *St Athan*

- b) No.22 Group was disbanded at the end of November 1940, being effectively split into two smaller units:

No.70 (Training and Development) Group

- c) The administrative element of 22 Group was then renamed Army Co-operation Command. Documented Headquarter locations conflict, but two placements used during the period were Ramslade Flats, Bracknell, Berkshire, and Farnborough Secondary School. The primary function of the command was in researching, developing and fine-tuning techniques involving Army / RAF liaison, which would be essential in a future invasion of Europe.

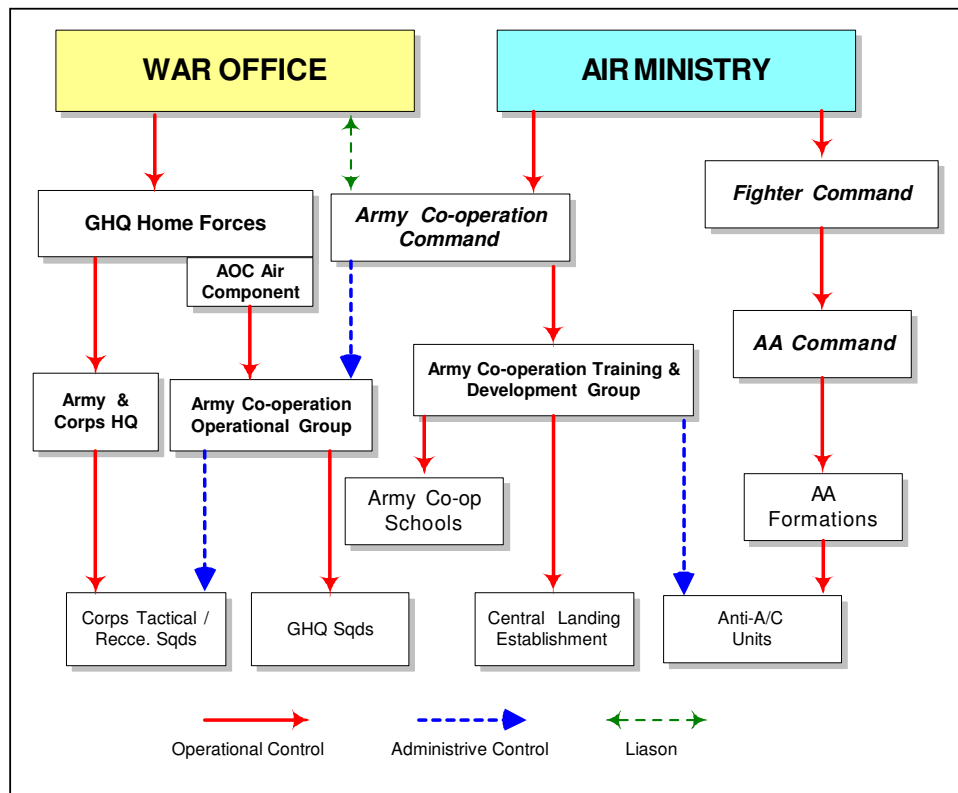


Fig. 11: Organisation of Army Co-operation Command

- d) A third unit called 72 Group was formed in June 1942 to cater for RAF Regiment training requirements. It consisted of:
- RAF Regiment Depot: *Grantham*
 - RAF Regiment Schools: Douglas (IoM), Filey and Whitley Bay
 - RAF Artillery School: *Eastchurch*
 - RAF Regiment OCTU: *Sidmouth*
 - RAF Regiment Wing: *Locking*.
- e) The command was split into six geographical sectors, plus two others. At the end of April 1943 these were, (with their HQs and airfields):
- 32 Wing (Scottish) – Edinburgh: *Kirknewton, Macmerry, Methven*
 - 33 Wing (Northern) – York: *Firbeck, Wellingore, York*
 - 34 Wing (Eastern) – Luton Hoo: *Bottisham, Sawbridgeworth, Snailwell, Stapleford Tawney, Westley*
 - 35 Wing (South-Eastern) – Reigate: *Detling, Gatwick, Hartford Bridge, Odiham, Penshurst*
 - 36 Wing (Southern) – Salisbury: *Andover, Old Sarum*
 - 37 Wing (Western) – Perton: *unallocated*
 - 38 Wing Airborne Division – Netheravon: *Hurn, Netheravon, Thruxton*
 - 39 Wing (RCAF) – Dunsfold: *Dunsfold, Middle Wallop*.
- f) Aircraft used were typically Auster III, Mustang, Spitfire, (and Whitleys in 38 Wing).
- g) With plans for the invasion well under way the command disbanded on 1 July 1943, with 71 Group transferring to a reformed No.22 Group.

2.4.8 Ferry / Transport Command

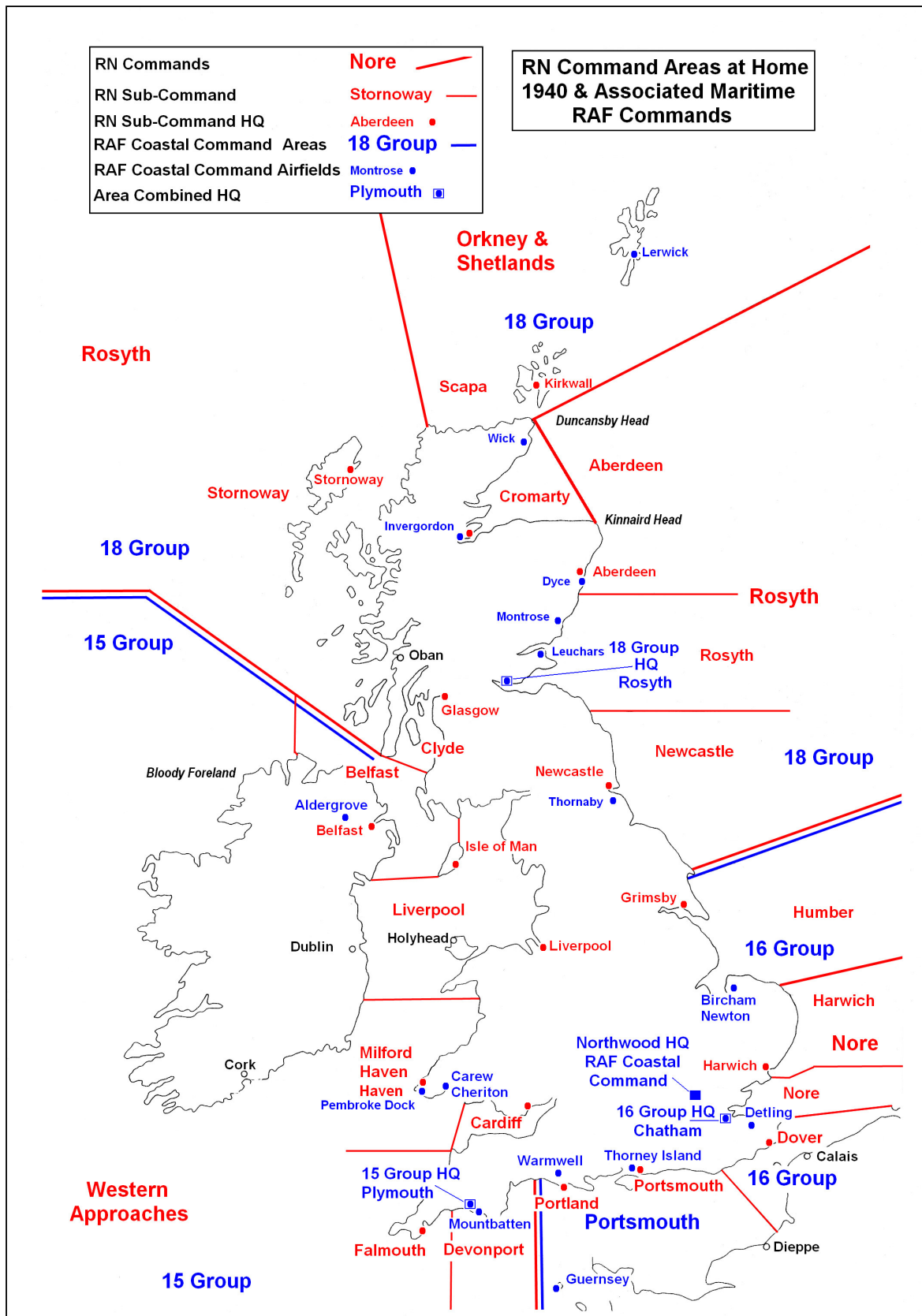
- a) Ferry Command came into existence on 20 July 1941 from the Atlantic Ferry Service. Prior to this date the task of transferring aircraft across the Atlantic had been in the hands of the civilian run Atlantic Ferry Organisation. The RAF now assumed responsibility and initially set up its HQ in central Montreal, before relocating to the airport at Dorval.²⁶ Three broad areas of aircraft operations were undertaken by the command:
- Reception from US Army Air Corps to Eastern airfields prior to despatch
 - Transport from North America to the UK, (clearly long range types only)
 - Operation of other air routes from the USA as may be required occasionally.
- b) Over 11,000 aircraft were delivered across the Ocean, most departing from airfields at Gander, Newfoundland, and Goose Bay, Labrador. During WWII however, with changing requirements the command was reduced to group status on 25 March 1943, and on the same day became part of the new Transport Command. The latter was formed at Harrow, Middlesex, which also imported No.44 (Ferry) Group. Two new tasks were now added to the unit remit:
- The transportation of aircraft to Australia and India
 - The delivery of supplies to Greenland and Newfoundland.

²⁶ Now Montreal Trudeau International Airport

- c) At the end of WWII the command had 36 bases and over a hundred staging posts. By the latter half of 1945 its major activity was in returning PoWs from Europe to the UK.
- d) On 17 April 1945 the HQ was relocated to Bushy Park, Teddington, Middlesex, and again to Upavon on 21 April 1952. Closure came on 1 August 1967, when it formed the nucleus of Air Support Command.

2.4.9 Coastal Command

Though the command was generally seen as runner-up to Bomber and Fighter Commands it continued to expand throughout WWII from its original four groups (15–18) with 16 squadrons and 265 aircraft, to seven home-based units plus two overseas factions (Gibraltar and Iceland). Despite a slight reduction in the reconnaissance and protection activities as the U-boat menace receded, there was a large increase in the offensive role with the appearance of the Strike Wings. In 1945 it had 50 squadrons with over 700 aircraft. In April 1941 operational control of the Command was passed to the Royal Navy.



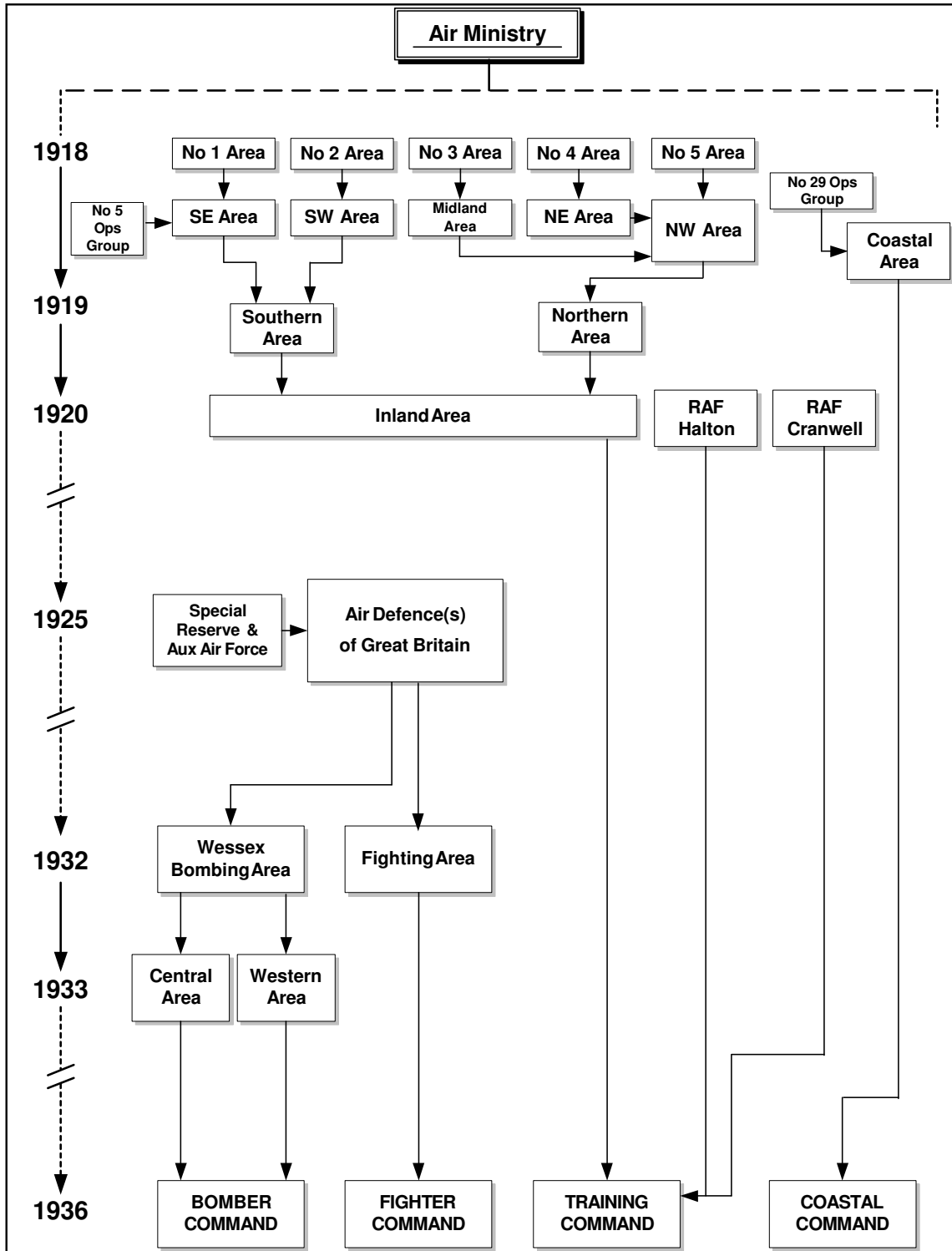


Fig. 13: The RAF Command Structure from 1918 to 1936

Part 3 – RAF Commands, post WWII

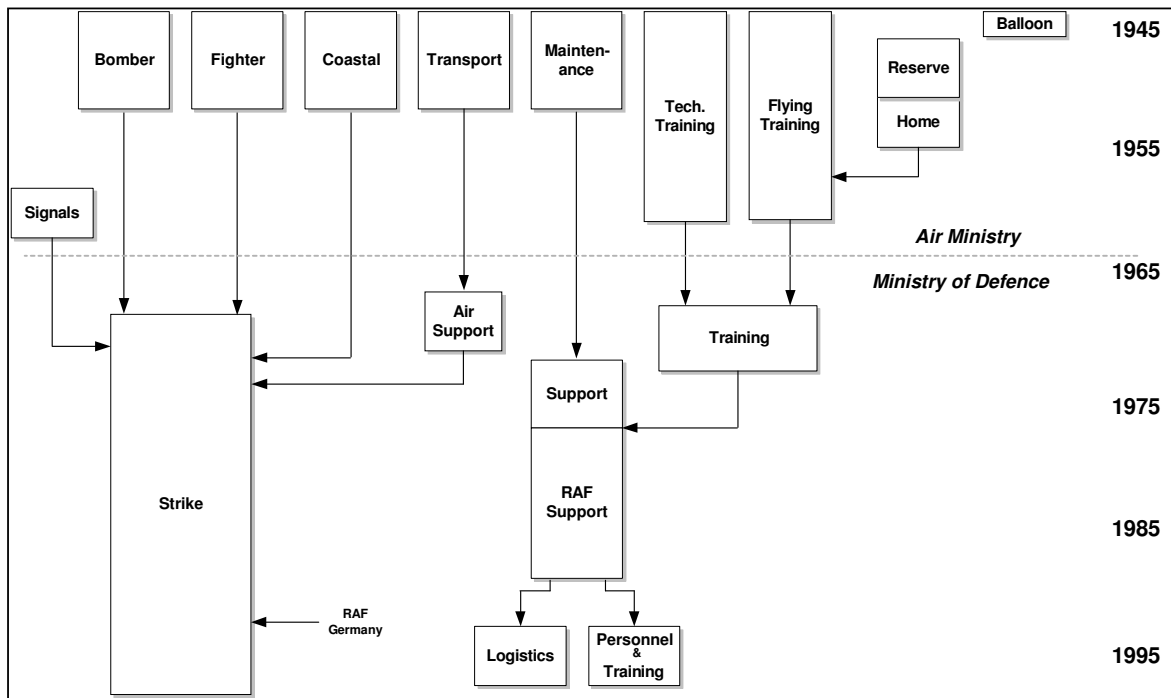


Fig. 14: The RAF Command Structure from WWII to 2000

3.1 – Command Structure, 1946–1960

3.1.1 Reserve Command

- a) Reserve Command reformed 1 May 1946, with HQ at White Waltham. It would re-establish the pre-WWII concept of all non-regular (part-time or reserve) personnel in both ground and flying roles. The principal units forming the above were:

20 Auxiliary Air Force flying squadrons	17 University Air Squadrons
22 Reserve Centres	21 Reserve Flying Schools
All Reserve air and ground crew	Air Training Corps
All other Auxiliary Units, e.g. Fighter Control Units	

- b) Within short space of time the group had accumulated a large number of diverse units, some 50 of which were added over the next few months, examples being:

Two Staff Colleges	Five Record Offices
Four Hospitals	Police HQ
Polish Air Force Film Unit	HQ Polish Air Force
Resettlement Centre	Central Medical Establishment
PoW Holding Unit	School of PT
School of Hygiene	School of Cookery
Inspector of Recruiting	Belgian Inspector General
British Bombing Survey Unit	RAF Selection Board

- c) The command was geographically organised into six groups. In 1950 it absorbed No.28 Group, which administered a number of non-operational units.

3.1.2 Home Command

- a) An Air Council decision in May 1940 recognised the increasing administrative component of Reserve Command, and resulted in it being renamed Home Command on 1 August. During the next few years there were some very significant changes within the group. These were:
 - The closure of all the Reserve Flying Schools
 - Transfer of Auxiliary Fighter Squadrons to Fighter Command
 - Reduction of Reserve Centres from twenty-two to six.²⁷
- b) Due to the high cost in maintaining the Group HQ, it was decided to transfer the remaining 59 regular and non-regular flying units to 23 Group Flying Training Command (which then had only six schools). Also the 16 regular and auxiliary units of the RAF Regiment would be transferred to 27 Group Technical Training Command. This was achieved and on 1 April 1959, Home Command was disbanded.

3.1.3 Signals Command

- a) The importance of electronic aids, principally in the fields of radio and both offensive and defensive radar had become well established during WWII, resulting in the formation of four specialised units:
 - 20 Group was partly responsible for the Technical Training Schools
 - 60 Group controlled the radar stations, particularly the entire Chain Home defence, plus several other installation and calibration units
 - 100 Group was Bomber Command's Electronic Countermeasures (ECM) support unit
 - 80 Wing was responsible for UK ground based countermeasures against German radio, navigation, and electronic bombing aids.
- b) In April 1946 the vestiges of these units were combined into a new command – 90 (Signals) Group based at Medmenham, Buckinghamshire. On 3 November 1958 its status was elevated to command level, which remained until 1 January 1969, when it reverted to group status under the control of Strike Command. Through this period its principal activities were:
 - Control and maintenance of RAF telecommunications at home and abroad
 - Installation and siting of ground radio equipment
 - Installation of cryptographic equipment
 - Flight performance, appraisal, and calibration of ground radio navigation approach and landing aids at home and abroad
 - Design, manufacture, installation, and major servicing of ground and airborne electronic warfare equipment.

3.1.4 Transport Command

A series of significant world events resulted in an increase in the size and workload of this unit during the late 1940s and early 1950s. Under a new AOC-in-C, Air Marshall R A Cochrane, it became the first command in the RAF to implement the specialised training of pilots on a particular type of aircraft – a move which significantly reduced the accident rate during the Berlin Airlift of 1948–9. The Command was heavily involved two years later in the Middle East and Kenya crises, and again in 1956 with Suez.

²⁷ The six eventually became one unit at RAF Innsworth

3.2 – The Ministry of Defence Era, 1960–1969

- a) In 1964 the Air Ministry was replaced by the Ministry of Defence (MoD).²⁸ This meant that the Air Council too was abolished, however its members remained the heads of the Air Staff Departments within the new Defence Council. The Air Staff then became responsible for setting policy and procurement.
- b) Britain's political and economic circumstances had changed dramatically since the command structure had been radically altered in 1936, particularly the roles of Bomber and Fighter Command. The days of very large numbers of aircraft partaking in a particular aggressive or defensive activity had gone for ever. Clearly more dramatic changes in the structure of the RAF were needed.

3.2.1 Air Support Command

This was in essence a renamed Transport Command, and was formed 1 August 1967. The HQ site was RAF Upavon. Its purpose was to command and control the forces operating mainly in support of the land units, including tactical reconnaissance and close support together with all transport support forces. The new structure would support the Army and Navy as well as the RAF. On 1 September 1972 it was absorbed into Strike Command as No.38 (Tactical Support) Group and No.46 (Strategic Support) Group.

3.2.2 Strike Command

- a) A dramatic reduction in aviation hardware since WWII had removed the need for a number of separate forces to undertake the defence of the UK. In addition the threat from the Soviet Union had meant that the RAF needed to be significantly more flexible and mobile than ever before. Hastened by economy cuts, the decision was taken to combine the existing offensive units into a completely new structure – Strike Command. This was formed by the amalgamation of Bomber Command and Fighter Command on 30 April 1968.
- b) Strike Command's purpose was to command and control the elements of air power which operate independently, or in support of naval forces. These included: strike, strategic reconnaissance, air defence, maritime patrol, air-to-air refuelling; plus certain calibration, communications and electronic warfare flying units.
- c) Bomber Command's HQ at High Wycombe was retained, with four subordinate group headquarters:
 - No.1 Bomber Group
 - No.11 Fighter Group
 - The Central Reconnaissance Establishment
 - The Military Air Traffic Operation.

²⁸ Volume 1, 'The Royal Navy' describes the structure of the MoD

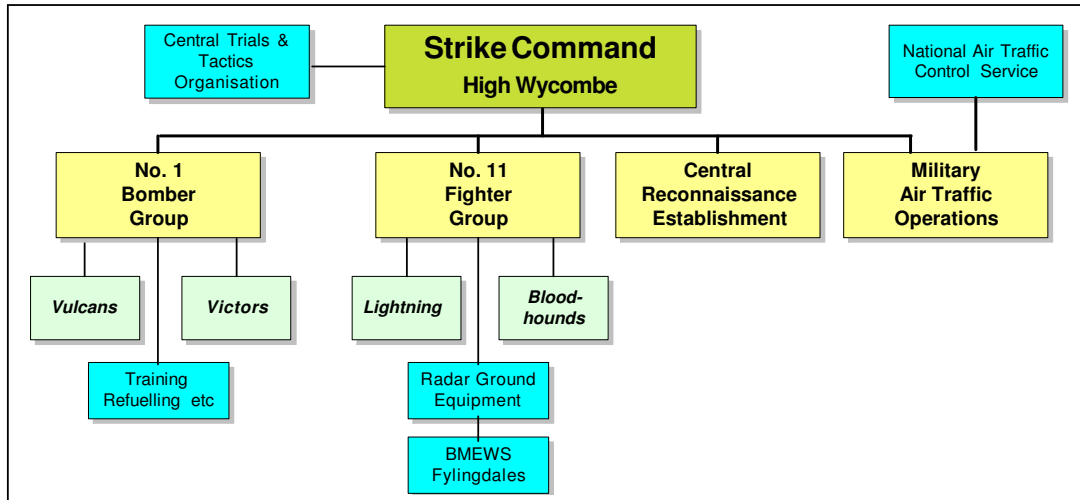


Fig. 15: Principal Elements operating within Strike Command on its Formation

d) The areas of operation and functions of these four elements were:

No.1 Bomber Group

The principal 'attack' weapon of the V-Force was Blue Steel, carried by all the Mark II Victors and some of the Vulcans. This missile could be launched either at high or low level, at a considerable distance from the target, and was considered to be a very difficult target to track by enemy defences. The remaining Vulcans would use conventional 'free-fall' nuclear weapons. These had maintained an immediate retaliatory 'Alert and Readiness' capability since 1957, and would continue to do so for many years (the UK's nuclear deterrent had recently been joined by the Navy's Polaris submarines).

No.11 Fighter Group

The Lightning aircraft, and the Bloodhound Surface-to-Air Missile were the principal weapons for the defence of the UK. The former was used on an almost daily basis to intercept Russian reconnaissance aircraft attempting to penetrate UK airspace, while the latter was a ground based system used to protect the V-bomber bases.

The Central Reconnaissance Establishment

This was responsible for operating and managing the reconnaissance forces based in the UK. It later became part of 1 Bomber Group.

The Military Air Traffic Operation

The Military Air Traffic Operation (MATO) was necessary as civil aviation in the UK was now many times greater than it had been prior to the 1950s. The training requirements in particular, of the RAF, therefore required very close co-ordination with the National Air Traffic Control Service (NATCS). Operational control of MATO therefore came under the Controller of NATCS, with Strike Command acting purely in an administrative and technical capacity.

e) Over the next few years two more elements became part of Strike Command.

No.90 Signals Group

This was formed from the existing Signals Command. Its duties would continue as before, except that it was now responsible to all three armed services, at home and overseas. In addition, it had a number of new tasks:

- Engineering support for the RAF's contribution of the Defence Communication Network throughout the world
- Responsibility for installation and design of Skynet Satellite communication systems
- Operating responsibility for the UK Skynet terminal at Oakhanger.

Coastal Command

During the 1950s and 1960s Coastal Command maintained a front-line role monitoring the activities of the Warsaw Pact forces. The Russians by this time had accumulated some 370 submarines, 1,300 ships and 4,000 smaller vessels which could be used in a military role. On 28 November 1969 it became No.18 (Maritime) Group as part of Strike Command.

3.3 – The command structure in 1969

a) There were four groups in operation:

- No.1 (Bomber) Group: *Bawtry*
- No.11 Group Air Defence: *Bentley Priory*
- No.18 Group Maritime: *Northwood*
- No.38 Group Air Transport and Offensive Support: *Upavon*.

b) On the day that Coastal Command was merged into Strike Command, the latter consisted of:

1 (Bomber Group), *Bawtry*:

- Airfields: *Finningley, Hemswell, Honington, Marham, Lindholme, Scampton, Waddington*
- Range Units: *Holbeach, Ramsey, Theddlethorpe, Wainfleet*
- Signals Units: *Coningsby, Dunkeswell, Lindholme*
- RAF Hospital: *Nocton Hall*
- No.11 (Fighter Group): *Bentley Priory*
- HQ (U) No.11 Group: *Stanmore Park*
- Air Defence Operations Centre: *Bentley Priory*
- MOD Control And Reporting Evaluation Team: *Bentley Priory*
- Airfields: *Aberporth, Binbrook, Leuchars, North Coates, Wattisham*
- Radar: *Bawdsey, Boulmer, Buchan, Fylingdales, Neatishead, Orfordness, Patrington, West Drayton, Staxton Wold*
- Signals Units: *Feltwell, Hartland Point, Saxa Vord*
- RAF Hospital: *Ely*
- STC Missile Practice Camp: *Valley*
- SAM Squadron: *West Raynham*
- Range: *Pembrey Sands*.

18 (Maritime Group) Northwood:

- HQ Elements: *Northwood, Mount Batten, Pitreavie Castle*
- Airfields (Sqns): *Ballykelly Leconfield, Kinloss, Machrihanish, Manston, St Mawgan, Turnhouse*
- Airfields (Flts): *Chivenor, Thorney Island, Valley, Acklington, Leuchars, Coltishall*
- Marine Craft Units: *Alness, Falmouth, Bridlington, Portrush, Newhaven, Holyhead, Tenby*
- Maritime OTU: *St Mawgan*
- School of Combat Survival: *Mount Batten*
- Air/Sea Warfare Development Unit: *Ballykelly*.

90 (Signals Group): Medmenham:

- Airfields: *Cottesmore, Feltwell, North Luffenham, Watton*
- Communications Centre (Comcen) Central: *Stanbridge*
- Comcen Northern: *Haydock*
- Comcen Eastern: *Newmarket*
- Comcen South-Eastern: *Uxbridge*
- Comcen South-Western: *Rudloe Manor*
- Comcen Central Detachments: *Bampton, Boddington, Edlesborough, Greatworth, Stoke Hammond*
- Signals Units: *Barkway, Digby, Haydock, Oakhanger, Oxenhope Moor, St Twynells, Sennen, Sharpitor, Sparsholt Firs, Stanbridge, Stenigot, Swingate*
- Loran Stations: *East Blockhouse, Garth Ness, Newton Point, Weybourne*
- Ariel Erectors School: *Digby*
- Casualty Air Evacuation Unit: *Hendon*
- Radio Engineering Unit: *Henlow*
- Signals Engineering Laboratory: *Northolt*
- Radio Introduction Unit: *Medmenham*
- Special Signals Unit: *Woolwich*
- Central Defects Authority (RAF): *Medmenham*
- Ground Radio Servicing Squadron: *Kinloss*.

3.4 – Towards the End of the Century, 1970–2000

3.4.1 Strike Command

- Strike Command gained two final partners in the 1970s, Air Support Command was absorbed as No.38 (Tactical Support) Group. Finally No.46 (Strategic Support) Group joined on 1 September 1972.
- On 1 April 1993 the command absorbed RAF Germany as No.2 (Bomber) Group.
- Flying Training and Technical Training Commands were again combined on 1 June 1968 and amalgamated into Training Command. The latter was eventually absorbed into RAF Support Command (13 June 1977).

3.4.2 Support Command

- a) Support Command was formed by renaming Maintenance Command on 31 August 1973. It also absorbed a number of other units primarily No.90 (Signals) Group. Its headquarters was at Andover, with a signals detachment at Medmenham. The functions of the group were diverse and included RAF Police and Fire Services.
- b) After four years it was officially retitled 'RAF Support Command' when it absorbed Training Command on 13 June 1977, and the HQ moved to Brampton.
- c) The original shorter name however continued to stick until, 17 years later on 1 April 1994, it finally split into two separate commands:
 - Logistics Command, with its HQ at RAF Brampton / Wyton. It was disbanded after exactly six years, by being absorbed into the Defence Logistics Organisation (DLO)
 - Personnel and Training Command, with HQ at Innsworth

3.4.3 Fighter Command HQ in the Cold War

- a) The end of the 1940s was accompanied by a very significant shift in the attitude regarding the security of Britain's airspace. The North Atlantic Treaty was signed in 1949 as a result of an increasing Soviet threat, and a year later the Korean War dispelled any doubts about the world becoming a safer place. Within three years home defence expenditure had quadrupled and Bentley Priory found itself once again at the helm of the protection of the UK.
- b) On 23 February 1953 the HQ Air Defence Operations Centre (ADOC) was formed at the Priory and located in the bunker. The function of the unit was:
 - In peace, to safeguard the integrity of the UK Air Defence Region
 - To alert the UK Air defence system (principally fighter wings and gun operations rooms), and deploy it in the most effective manner
 - To provide warning of air attack to:
 - The Sector Operations Centres (SOC)
 - Air Force Operations Room
 - UK based bomber forces
 - The Home Office
 - Allied forces in Europe
 - The USAF 3rd Air Force.
- c) Modifications were made to the command centre with much of the WWII apparatus being removed and replaced by updated equipment and procedures, some of which had been recommended in the Cherry Report. New display boards and 'tote's were provided showing:
 - Order of Battle
 - Transport Aircraft
 - Airfield Capability
 - 'Degree 3' Deployment
 - General Situation Map (GSM).
- d) The GSM, was a much revised table on which was shown damage and radiated areas following a nuclear attack. From this it was possible to assess possible effects on civil and military

personnel within these areas. A ‘watch’ system was established, consisting of a wing commander and three squadron leaders under the command of a group captain.

- e) For the next few years exercises were carried out on a very regular basis to train a significant number of staff and to ‘fine-tune’ the updated defence system. Typical exercises were of the form of simulated attacks on the UK using Canberras from Bomber Command, and appropriate defence using Fighter Command’s Meteors, Venoms, Hunters, and Javelins. The fine-tuning was certainly necessary as during one attack in the infancy of the simulations a raid went completely undetected as it was later reported to, ‘*have arrived much earlier than expected*’.
- f) Other exercises included simultaneous nuclear strikes on the Lincolnshire bomber bases, while ‘back-door’ raiders attacked UK ports and large industrial areas. Many of these simulations were extremely intensive and operated on a 24/7 basis, requiring a large number of additional staff who were accommodated in tents in nearby Cedars Clutch. Units and aircraft involved in these exercises were typically as shown in the following table:

Table 4 – Units Participating in UK Defence, c.1955		
Sector	Station	Aircraft
Caledonian	<i>Leuchars</i>	H1 H4 V3
Northern	<i>Linton</i>	M12 M14 S
	<i>Acklington</i>	M8
	<i>Church Fenton</i>	M8
	<i>Driffield</i>	V2
	<i>Leconfield</i>	H1 M8
	<i>Leeming</i>	?
Western	<i>Valley</i>	M11
	<i>Pembrey</i>	H1
Eastern	<i>West Raynham</i>	H1 H4 J1 M11 M12 V3
	<i>Coltishall</i>	V3
	<i>Horsham St Faith</i>	M8 M12 M14
	<i>Waterbeach</i>	H5 M8 V2
	<i>Strubby</i>	H5
	<i>Stradishall</i>	M8 V3
	<i>North Luffenham</i>	M12 M14
	<i>Bentwaters</i>	S
Metropolitan	<i>Duxford</i>	M8
	<i>Wattisham</i>	H2 H5 M12 M14
	<i>Heathrow</i>	?
	<i>West Malling</i>	M12 M14
	<i>Martlesham Heath</i>	H4
	<i>Manston</i>	S
	<i>Odiham</i>	H1 H4 M12 M14
	<i>Tangmere</i>	H2 H5 M11
Aircraft abbreviations are: H unter, J avelin M eteor S abre V enom, followed by their respective Mk.		

- g) Further essential improvements were made to the underground ADOC as required. In September 1956 secure direct phone lines were established from AA Command, the Admiralty,

USAF 3rd Air Force, RAF Medmenham, Bomber and Coastal Commands, NATO units in France, and all the UK's GCI stations.

- h) During 1957 the base was responsible for successfully monitoring several Russian long-range 'Zombie' flights, typically Moscow to the USA and back, via London. These used TU-104 jet liner aircraft operating at 30–36,000 feet at speeds of 380–450 knots. This marked the beginning of Soviet reconnaissance incursions into UK airspace which would take place over the next two decades. Quick-Reaction-Alert (QRA) flights based at Leuchars, Binbrook Coningsby and Wattisham were provided to intercept these or any other intrusions. From 1960 the aircraft used was the Lightning, replaced by the Phantom nine years later.
- i) Intelligence probing by the world powers had now changed from photographic to electronic signals / communications gathering. In the late 1960s Communications Security (COMSEC) alerts were at an all time high. As an example, in 1968 there were 181 QRA scrambles (54 during July alone) which resulted in 139 successful intercepts with the long-range TU-95 Bear, M-4 Bison, and Tu-16 Badger aircraft by RAF Lightnings. By the early 1980s the frequency had dropped, but five intrusions per week was typical of the period.
- j) With the formation of Strike Command, Fighter Command was disbanded in April 1968 and Bentley Priory became HQ No.11 Fighter Group as part of the new command. Its function did not immediately change, but was renamed Strike Command Administrative HQ, until new accommodation became available at High Wycombe. By 1973 all front-line elements had been transferred from the Priory, including ADOC which had vacated the bunker in 1971. The latter however continued to be used as the Alternate Air Defence Operations Centre Facility, and a secure communications base.
- k) In the early 1970s the structural state of the Priory had become such that extensive restoration work was required if it were to survive. A lengthy investigation proved necessary as to the viability of restoration, as at that time the building contained only offices and messes, and the cost of the renovation would be high. There was also a serious worry that a large number of contractors would have access to a secure military site. As part of this investigation in October 1974, advice was sought from five eminent WWII historians:
 - Sir Dermot Boyle – Marshal Royal Air Force
 - Professor Sir James Butler – Trinity College Cambridge
 - Group Captain T P Gleave – Cabinet Office historian and Battle of Britain Association
 - Denis Richards – author 'Royal Air Force 1939–1945'
 - Robert Wright – former Principal Staff Officer to Lord Dowding.
- l) Their general consensus was that apart from Dowding's office, the building really contained little of historical importance, and was therefore possibly not worth the expense. They were all adamant however that the really historical item on the entire site was the underground bunker which should be preserved at all cost. During the decade two other possibilities were explored:
 - To significantly expand the site. This was dropped as it was felt that major extensions would not be 'in-keeping' with the area
 - To relinquish the entire site. This was also quickly rejected, the primary reason being that its unique and extensive underground block would prove very expensive to relocate to another site.

- m) The decision taken was to maintain the site at roughly the same size, however with active elements having left the site, it was now possible to move in support facilities from Stanmore Park, and the Officer and Aircrew Selection Centre from Biggin Hill. These changes needed a substantial Officers' Mess, and therefore the Priory itself was allocated £1M for refurbishment. However, a serious fire in 1979 during the reconstruction destroyed part of the building, which was then rebuilt, albeit at a cost of £3.1million. The cause of the fire was traced to negligence by contractors.
- n) In 1995, 11 and 18 Groups amalgamated with the Priory as their combined HQ; this unit lasted five years until the group status was lost due to new requirements within Strike Command.
- o) Since April 2000 the Priory has no longer been a headquarters unit; it recently housed the Institute of Flight Safety, the Air Historical Branch, and a number of other independent units. The main building remained as an officer's mess.

Part 4 – The Growth of the Air Ministry

4.1.1 Pre WWII

- a) The first Air Ministry (AM) Headquarters was in Cecil House in the Strand, (then the largest hotel in London, now Shell Mex House). It was affectionately known as ‘Hotel Bolo’,²⁹ or ‘Bolo House, and at that time its staff evidently consisted of ‘a few professionals and a large number of enthusiastic amateurs’.³⁰
- b) In 1919 it moved into a new location, an apparently hideous building housing three separate blocks called Empire, India, and Canada Houses, on the south-east corner of Kingsway. It was originally described as ‘far too big’ for the AM and was locally renamed ‘Air House’, though the inmates continued the tradition and referred to it as ‘The Bolo’. This name, known by all taxi drivers became the subject of an internal memo which forbade its use, in order to put some professionalism into the new service.
- c) This move was considered by many to be on a temporary basis as Sir Alfred Mond, the First Commissioner of Works, had expressed the desire that the Fighting Departments should all be located together in Whitehall. No suitable premises became vacant, and two years later pressure was placed on the owners of the building to change the name to ‘Adastral House’ as this had intimate connections with the RFC and their locations at De Keyser Hotel. Though strongly opposed by the owners, who decided it would be difficult to sell, the name was officially adopted in 1922.
- d) The hierarchy of the Air Ministry can be represented by, in order: The King, The Secretary of State for Air, The Parliamentary Under-Secretary of State for Air. In 1921 the latter was responsible for the following departments:

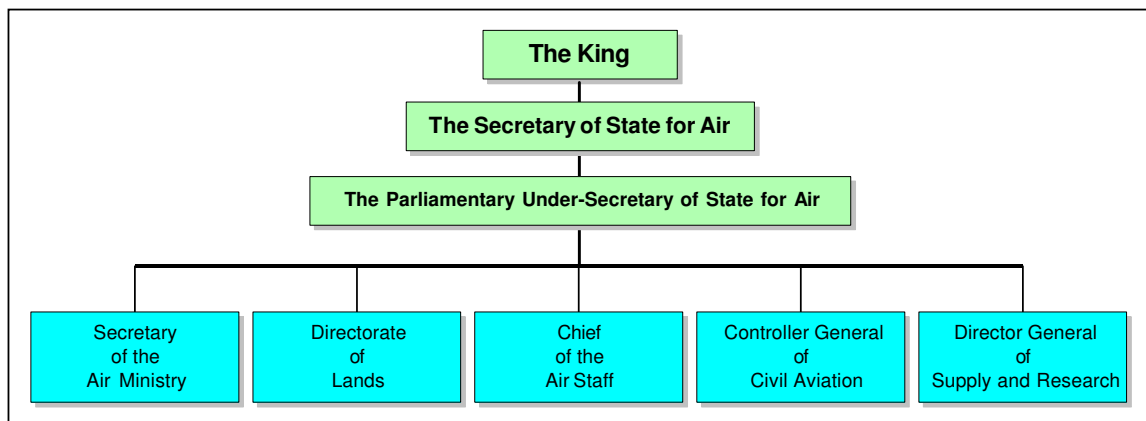


Fig. 16: Air Ministry Hierarchy, 1921

- e) Despite continued pressure to relocate the Ministry to Whitehall along with the Admiralty and War Office nothing happened until the 1930s. By May 1931 the staffing level was 1,680 personnel, including the Air Historical Branch, and additional premises were soon required. Gwydyr House in Whitehall became the Met. Office and minister’s offices. The Archives were relocated to Catherine Street near Aldwych, while Alexandra House in Kingsway, Clements

²⁹ The term Bolo came from ‘Paul Bolo’ a confidence trickster and traitor eventually executed by the French

³⁰ Dean 1979

Inn, near Bush House; and Leake Street across the River in SE1, were also added. The total hired accommodation was now costing £50,000 per annum. The possibility of finding a suitable building which would allow the construction of a roof-top aerodrome was investigated. This didn't happen for obvious reasons and four years later the number of staff had risen to 2,415 and were housed accordingly:

Adastral House (1,312)	Alexandra and Princes House (433)
Victory House (240)	Clements Inn (31)
Gwydyr House (93)	Met Office (South Kensington) (67)
Bush House, NE and NW wings (239)	

- f) Eventually the decision was taken to construct a new purpose built building in Whitehall Gardens. The structure had to satisfy the critical tastes of the Royal Fine Arts Commission and the architect chosen was Mr Vincent Harris. An investigation was made into making the building 'bomb proof'. This was soon deemed to be impossible, and the idea of building a 'Tube Station' 30 metres underground seemed a possibility. Comparisons were made with the Berlin Air Ministry building, and the idea was dropped in favour of a reinforced-concrete roof and substantial walls and flooring. The building would be 'bomb resistant' as it was considered that five metres of concrete would be required to resist a 500lb bomb.
- g) Though approved in 1935, progress was suspended in November 1936 as a result of an inquiry instigated by the CID, which suggested that the erection of such a prominent building in Central London would be an obvious military target. Certain opponents of the Air Ministry thought that the building should, in fact, proceed as, in times of war, *'The extinction of the Air Ministry would have been an important step in the path to victory'*.³¹
- h) The objection was over-ruled in February 1937, and excavations began a year later – with the intention of completing the first half of the building by 1943. The outbreak of WWII ended all work on the site with the exception of a citadel, plus other underground facilities which were constructed for the nearby War Office.
- i) Shortly before the commencement of WWII the original five departments had expanded considerably, and the structure at this time was as follows:
 - Department of the Permanent Under-Secretary of State for Air; includes *Press, Accounts and Contracts*
 - Meteorological Office
 - Air Raid Precautions (Air Ministry)
 - Department of the Chief of the Air Staff; includes *Plans, Operations, Signals and Staff Duties*
 - Department of the Air Member for Personnel; includes *Postings, Training, Educational Service and Medical Services*
 - Department of the Air Member for Development and Production –
(Development); includes *Technical Development, Scientific Research, Armament Development, Communications, Repair and Maintenance*
(Production); includes *Aeroplanes, Engines. Subcontracts, AM Factories, Aeronautical Inspection, Statistics and Planning*

³¹ Dean 1979

- Department of the Air Member for Supply and Organisation; includes *Organisation, Volunteer Reserve Expansion, Equipment, Works*
 - Accidents Branch
 - The Directorate General of Civil Aviation; includes *Home Aviation, Overseas Aviation, finance, Civil Research and Production, Operational Services and Intelligence.*
 - Director of the Auxiliary Air Force
 - Office of the Judge Advocate General of the Forces.
- j) This increase caused by the expansion of the RAF clearly needed extra premises, and in 1938 there was what became known as ‘The Invasion of Berkeley Square House’. More accommodation was sought; the end of the year saw the following properties in use:

Adastral House	Africa House	Alexandra House
Ariel House	Awdry House	Berkeley Square House
Bush House NE	Bush House SE	Clements Inn
Ibex House	Imperial House	Melbourne House
Pen Corner	Princes House	Savoy Hill House
Staffordshire House	Turnstile House (part)	Victory House
Whitehall Gardens	Woburn House	York House



Plate 9: Berkeley Square House.

Photo: 18-09-06

4.1.2 Protected Premises

- a) The fear of London being flattened by enemy bombing was high in the minds of the Government in the mid to late 1930s. Though often now described as paranoia, there was real need for concern as, on 1 Jan 1940 in the *Volkischer Beobachter*, Goering had promised:

'The German Air Force will strike at Britain with such an onslaught as has never been known in the history of the world, as soon as Hitler orders counter-measures to the British blockade. Once again as the German Zeppelins did twenty-five years ago, German air squadrons will unleash air-raid alarms over London'.

- b) In June 1938 work began on the construction of a secure citadel in Whitehall for a future War Cabinet. The New Public Offices building (NPO) had been partially vacated by the Board of Education and Office of Works, and was rapidly modified by the installation of a thick concrete bomb-proof concrete slab, just below the ground floor.³² This formed the roof of the basement, and some protected accommodation had become available to the Air Ministry from February 1939. Later additional protection consisted of torpedo nets hung in critical places to catch falling bombs. Air filtration and conditioning was installed as security against a chemical weapon attack. The Central Administrative Unit comprising 150 Senior AM Staff, plus 700 extras moved from Adastral House into the building.³³ This move was partly for safety, but principally for ease of liaison with the Army, the Navy and the Prime Minister. The eventual aim was to have 400 staff below ground in the newly constructed citadel, plus 560 above ground. A site plan named 'Whitehall' exists in the National Archives, dated 1939.³⁴ It shows a large circular room with offices for senior top-level AM Staff.
- c) Shortly before war began some dispersal took place within the Ministry. The Department for Development and Production moved from London to hotel accommodation in Harrogate, and other departments moved to Aberystwyth, Cirencester, Dunstable, Hayes, Shepperton, Stroud, and Worcester.
- d) In all some 60 buildings were occupied by staff – which had increased from a total of 1,700 in May 1934 to 8,000. A series of schemes were devised to meet the needs of an evacuation of the central Whitehall area should the requirement arise for any reason.

4.1.3 Evacuation Plans

- a) The Rae Committee under Sir James Rae was formed c.1937 to determine methods of evacuating essential services, including the Government, the military, and key ancillary services, in the event of the situation in London becoming untenable.
- b) These personnel were categorised as 'A' staff, or 'B' staff. The former were those key to the day-to-day running of the war, for example operations and intelligence departments of the fighting forces. 'B' staff were essential to the war effort, though not on the day-to-day basis and included personnel, production, accounts and design departments.

³² Also known as King Charles Street, or 1 Storey's Gate, it is now the Treasury, with one basement section, (the Cabinet War Rooms) open as a tourist attraction

³³ Later became the Central Executive Unit and War Group

³⁴ AIR2/3650

- c) Four schemes were eventually proposed which would evacuate up to 100,000 civil servants from London. Two of the schemes were for a relatively small number of senior personnel and their supporting staff, all of whom would be category 'A':
- **The North-West Suburban Plan** – involved all key war departments and the Cabinet relocating to the London outskirts around Harrow and Neasden
 - **The Blue Move** – which would have involved 7,500 very senior and key personnel moving to Bournemouth; a somewhat bizarre location since, being on the coast, it would be very easy to locate from the air.

4.1.4 The Black and Yellow Plans

- a) Two other plans were formulated in very great detail, which would cater for much greater numbers:
- **The Black Move** – Up to 30,000 'A' staff would relocate to the West Country, roughly between Gloucester and Bromsgrove. The Cabinet and the Royal Family would be included. This area was chosen as being sufficiently far away from London, and also well inland, thereby being difficult to access and locate from the air
 - **The Yellow Move** – was for 'B' staff and up to 70,000 were involved. They would be evacuated to the north of England and Wales, typically Blackpool, Buxton, Matlock, Morecambe, Liverpool, Llandudno, Rhyl, and Southport.
- b) The actual locations, many of which were 'spa' towns, were top secret at the time and referred to only by letter pairs, examples being Cheltenham (KA) and Droitwich (GJ).
- c) These 'Moves' would be launched either independently, or sequentially – in any order, but never simultaneously. The Black move was abrogated by the Cabinet in October 1940, it was felt essential that the government and key personnel in all departments should remain in Whitehall; the Yellow Move was later modified and renamed *Grey Move*. There was also the issue that a mass exodus from London would spread panic amongst the population, however as a cautionary measure certain components of both plans would at some point be launched to completion.
- d) Each move involved five parties: 'A' and 'B' were advance parties, to set up the new facilities. 'C' was the main party, and 'D' and 'E' were the retard parties to follow later, having closed down, and tidied up the original London sites. There was also the 'X' Party which comprised ministers, heads of departments and chiefs of staff. This information was highly confidential the time, with details known only to a few key figures. All destinations were codenamed using letter pairs as described above; transportation routes were represented by a single letter (O to Y); the date of the move being 'Z-day, Z+1' etc.
- e) The actual transport arrangements were also coded as type 'A' or 'B', the former being preferred, while the latter would be used if the national rail network became significantly damaged. Most of the secret documents available at the time referred to all aspects of the plans via their code letters, names were rarely used.
- f) In November 1937 the estimate was that 1,006 key Air Ministry staff would require relocation in an emergency; with contingency this was rounded up to 1,400. Though a large number of these stayed in London as secure accommodation became available, a significant number plus sections of several other branches left the City at the beginning of the war. The principal targets for the relocated staff were in the West Country, and Harrogate.

4.1.5 West Country Relocation

- a) The original Scheme allowed for the following number of Air Ministry personnel to relocate to the Western Counties:

Bath AA (209)	Bromsgrove GA (102)	Bristol AJ (102)
Cirencester JK (602)	Gloucester CJ (1,055)	Stroud QA (734)
Tetbury JJ (634)	Warwick HJ (1,100)	Worcester OA (1,239)

- b) The latter was by far the most important with potential accommodation for department heads, very senior personnel, Chief of the Air Staff and Permanent Under-secretaries etc. The priority here was excellent communications with the rest of the UK, and this was available at the adjacent RAF Universal Equipment Depot at Hartlebury, with its very large telephone and signal terminal. Several branches, including accounts, were evacuated to Worcester and the Stroud area in 1940.

- c) In the event the following locations were used:

Stroud – QA (Accounts Branch and others):

School of Arts and Crafts, Lansdowne Road	Imperial Hotel, Great Western Road
Wyeclyffe School, Stonehouse	Holloway Institute, Russell Street
Subscription Rooms, George Street	Bear Inn, Redborough

Tetbury – JJ (Met Office):

Westonbirt School	Hare and Hounds Hotel
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Worcester – OA (Large number of branches plus, including units from Kidbrooke³⁵):

Kings School, College Green	Victoria Institute, Foregate
Poor Law Institution, Tallow Hill ³⁶	Shire Hall, Foregate
Hop Market Hotel, Foregate and Sansome Street	Guildhall, High Street
Tredennyke Prep School, Barbourne Crescent	Public Hall, Cornmarket
Sunnyside Prep School, 15 Barbourne Terrace	Star Hotel, Foregate
Great Western Hotel, Shrub Hill Road	Crown Hotel, 10 Broad Street
Aymestrey Prep School, Crown East	Hindlip Hall

- d) Mention was also made of 250 civil aviation staff being sent to Bristol, and 100 from the Meteorological Office relocating to Bromsgrove and Leighton Buzzard.

4.1.6 Yellow / Grey Plan Relocation

- a) Berkeley Square House was home to the Departments of Planning, Production, and Research. In 1939 with a staff of 2,600 it was described as being ‘*a very vulnerable basket of precious eggs*’.³⁷ A large number of staff were relocated to Harrogate in 1940, some 1,670 places being immediately available. The branch became the Ministry of Aircraft Production (MAP) in 1940.

³⁵ Bombed out in early 1941

³⁶ This was the new telephone exchange for the area and codenamed ‘Longfellow’

³⁷ Air 75/4

- b) Other sections of the MAP were eventually located at Leatherhead (124), Oxford (140), Banbury (220), Sheffield (20), and Birmingham (30). The Headquarters however remained at Thames House, South Millbank, (which reputedly had ‘deep basements’), and in May 1941 housed 3,300 staff, many of whom would later find themselves in Harrogate.

Harrogate (ZA) (principally MAP):

Granby Hotel, Granby Road	Majestic Hotel, Springfield Avenue
Southlands Hotel, Ripon Road	St George’s Hotel, Ripon Road
Cairn Hydro, Ripon Road	Harrogate Hydro, Swan Road
Prospect Hotel, Prospect Place	Alexandra Hotel, Prospect Place
Tech Inst. / School of Art, Haywra Crescent	Crown Hotel, Crown Place
White Hart Hotel, Cold Bath Road	Wellington Hotel, Cold Bath Road
Harlow Manor Hotel, Cold Bath Road	Beechwood Hotel, Queens Road
Grand Hotel, Cornwall Road	Stray Hotel, Beech Grove
Royal Hotel, York Place	Prince of Wales Hotel, York Place
Queens Hotel, York Place	New College, Leadhall Lane
Harrogate Ladies College, Clarence Drive	Oatlands Prep. School, Oatlands Drive
Ashville College, Pannal Ash	Pannal Ash College, Pannal Ash
Queen Ethelburga’s School, Penny Pot Lane	

- c) There were soon complaints regarding the large number of chauffeur driven Daimlers frequently seen about the spa, who seemed to have total disregard for the acute petrol shortage. As with other requisitioned provincial accommodation, certain living standards and rules had been set up in advance. As an example, in any hotel a service breakfast could be obtained for one shilling, and a three-course lunch or evening meal was just one-and-sixpence.

4.1.7 The North-West Suburbs

- a) The proposed relocation plan was to move to a residential area around Harrow, Middlesex. The Air Ministry was allocated the following premises and staff levels:³⁸

Harrow County Boys School, Gayton Road (160)	Eastcote Lane Schools (440)
Harrow County Girls School, Lowlands Road (140)	The Belmont School (180)
Wealdstone Bridge School, Station Road (170)	Hibbert Road School (190)
Priestmead School, Hartford Ave, Wealdstone (180)	

- b) The War Group, currently located in the basement of New Public Offices, Whitehall also had two ‘Insurance Parties’, the larger of which would relocate to Garston (Watford) or Belmont School, Harrow, and the smaller to Worcester in an emergency.
- c) Work began in 1938 on an underground citadel for the Air Ministry in Harrow beneath the annexe of the HMSO offices in Headstone Drive and Hailsham Drive, Wealdstone.³⁹ It was codenamed ‘*Station Z*’ and was described as the only bunker provided with really adequate protection (it would resist a 500lb bomb). Other citadels were also built in the area for the Cabinet and the Admiralty, but a proposal for a War Office structure never materialised.

³⁸ AIR2/3650

³⁹ Campbell, 1982

- d) The staff who would relocate to Station Z would be:

Secretary of State for Air	Under-Secretary of State for Air
Permanent Under-Secretary, and selected departments	
Chief of the Air Staff, and the Department of the Chief of the Air Staff	
Directorate of Intelligence	Directorate of Signals
Directorate of Operations (Home)	Directorate of Ops Naval Co-operation
Directorate of Operations (Overseas)	Directorate of Ops Requirements
Directorate of Plans	Directorate of Public Relations
Directorate of Ground Defence	

- e) Overall the Suburban Plan was a failure; despite the availability of the secure bunkers for the services, they all preferred to remain in Whitehall. The communication difficulties experienced in the late 1930s between the Air Ministry in Kingsway, and the Army and Navy in Whitehall had already proved unacceptable. An evacuation to premises spread all over north-west London could only be worse.
- f) Station Z was not used by Ministry departments during WWII. It did however house Nos.2701 and 2702 Defence Squadrons of the RAF Regiment, plus an aircrew technical training unit from 1942. The reserve Fighter Command HQ Operations Room known as 'The Manor' also used the building from June 1942. In December 1943 it was reported to be used as HQ for RAF Transport Command.⁴⁰ It does not appear in ministerial accommodation lists until after the war. Much later it became the Home Office Central Communications Establishment. The HMSO / CCE site was demolished in the 1990s but the underground bunker is still extant.⁴¹

4.1.8 The Temporary Office Building (TOB)

- a) The probability of mass staff evacuation from London required the rapid construction of extensive office accommodation in the provinces. By 1940 a new type of building had been designed by Sir James West for the Ministry of Works, and constructed in groups, generally on the outskirts of towns.⁴² This building was a steel-framed single-storey brick and concrete construction, having a central spine with a central reception area, and twelve wings. The corridors within the spine were made wide enough such that the building could easily be converted into a hospital, or other premises should the need arise.
- b) These buildings were so successful that many are still in use today. Some time after WWII they were renamed the Standard Office Buildings (SOB).
- c) Between one and six blocks were built at each site, three being the average, however space was always reserved for additional construction. A separate canteen building was located on each site of more than one block. The first unit available for use was at Redhill, Worcester in June 1940, and a further eleven had been completed across the UK by the end of the year. Three such sites were eventually allocated to the Air Ministry, two initially in Worcester and a third at Harrogate.

⁴⁰ CAB 80/77/16

⁴¹ www.subbrit.org.uk/sb-sites/sites/s/station_z/index.shtml

⁴² Work 69/13



Plate 10: An ex Air Ministry TOB at the University of Worcester (Henwick).

Photo 10-11-06

Worcester West, (Henwick) The site is now part of the University of Worcester. One of the three original buildings has been demolished, and the end wing removed from a second. There is no trace of the canteen unit.

Worcester East, (Redhill) Generally known as Whittington, the site is currently owned by DEFRA and all three original buildings, plus the canteen are in use.

Harrogate A site having four blocks was constructed in the Rossett area. During WWII they were occupied by other Government departments, chiefly the Post Office. In 1945 Air Ministry staff accommodated in nearby hotels were all relocated to the TOBs. The site is currently extant.

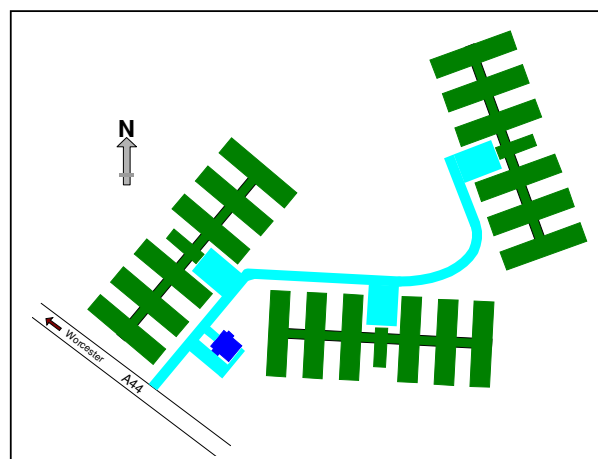


Fig. 17: The AM wartime site at Redhill, Whittington, Worcester

This shows a typical arrangement of three TOBs, plus a canteen block

- d) During WWII sections of other AM branches were found in Aberystwyth, Cirencester, Dunstable, Hayes, and Shepperton. In all some 60 buildings were occupied by staff which had increased from a total of 1,700 in May 1934 to 8,000 by the beginning of the conflict.

4.1.9 Wartime Protected Premises.

- a) Two further secure buildings were used by the Air Ministry during WWII. These were often referred to as citadels, either at the time or later. Extraordinarily very little hard evidence exists as to the usage of these sites. Chronologically they were:
 - The Rotundas
 - The Steel Framed Building.
- b) By 1942 a new secure construction had been built in Horseferry Road, around the corner from the current citadel under the NPO in Whitehall. Using vast holes in the ground previously built by the Gas Light and Coke Company for their gasholders, two 3-level underground war rooms were constructed under the protection of twelve feet of concrete. These were known as the North and South Rotundas, and offer was made to the Air Ministry of some 67% of the total accommodation available. In anticipation a very expensive tunnel was driven linking the Rotundas with the AM section of the NPO.
- c) After a lengthy debate the Ministry rejected the offer as it would place far too many staff permanently below ground. They were then advised that failure to occupy would result in the that offer being made to other ministries. GHQ Home Forces then accepted the offer, but a few months later, when sustained rocket attacks on London became apparent, the Air Ministry changed its mind and requested the Rotunda accommodation. It was too late, reservations had been made for Chief of Staff, Supreme Allied Commander (COSSAC), and his team who were currently located in the now vulnerable Norfolk House and 80 Pall Mall. The Air Ministry was forced to settle for limited accommodation in the south building (known as 18–19 Monck Street), shared with COSSAC.
- d) Adjacent to the Rotundas at 17 Monck Street, was a multi level building with a secure basement. This eventually contained the AM Intelligence Department, plus other sections, and was generally referred to as '*The Steel Framed Building*', and it continued to be used in the late 1940s. Initially a three-storey building, with the middle level half underground, and capped by a huge concrete slab, further floors were added at later dates. The basement was linked by the series of deep-level tunnels under Whitehall, which also accessed the War Office and Admiralty citadels.

4.1.10 Post WWII Accommodation.

At the end of WWII (actually 25 Aug 1945) the Air Ministry, probably at record staff level numbering over 15,000, was housed in the following buildings:

Adastral House, Kingsway WC2 (1,279)
 Abbey House, Baker Street NW1 (72)
 Alexandra /York House, Kingsway WC2 (401)
 Ariel House (335) – Ministry of Civil Aviation
 Ashley Gardens SW1 (191)
 Awdry / Imperial House, 11 Kingsway WC2 (184) – Central Medical Establishment
 42 Berkeley Square W1 (15)
 40 Berkeley Street W1 (0)
 9 Albemarle Street W1(0)
 Bush House, Aldwych WC2 (1,542)
 5/6 Clements Inn WC2 (50)

Cornwall House and Annexe, Waterloo Road SE1 (170) – includes met. trainees
Eastbury Court, (possibly Northwood ?) (252)
194 Euston Road NW1 (407)
15 Grosvenor Place SW1 (17)
Houghton House and Annexe ? (469)
26/40 Kensington High Street W8 (455) – Barkers department store
16 / 19 Lowndes Square SW1 (151)
The Manor (Percy Street W1 ?) (2)
17 Monck Street SW1 (499) – the Steel Framed Building
18/19 Monck Street SW1(120) – the South Rotunda
30 Moorgate EC2 (132)
8 New Court EC4 (32)
New Public Offices, King Charles Street SW1 (1,366)
73/77 Oxford Street W1 (403) – Drages store, used by RCAF
Parliament Square House SW1 (86)
Pen Corner, 41 Kingsway WC2 (33) (RCAF)
Princes House, Kingsway WC2 (262) (MAP)
Queen Anne's Gate SW1 (90)
16 Randolph Gardens NW6 (273) – Convent Buildings
2/8 Richmond Terrace SW1 (16)
25, Savile Row W1(1)
Seaford House, Belgrave Square SW1 (102)
2 Seville Street SW1 (369)
17 Southampton Row WC1 (146)
Turnstile House, High Holborn WC1 (475)
Victoria House, Southampton Row WC1 (84)
Victory House, 32/34 Kingsway WC2 (384)
19/29 Woburn Place WC1 (670)

Provinces:

Harrogate (1,408)
Hayes, 234 and 238/9 Nestles Ave (41) – Archives
Shepperton (75)
Stroud (309)
Worcester (1,506)

- a) This was a period of great change within the Ministry and several new offices were taken on since in the next two years, i.e.

8/9 Buckingham Gate SW1
14/16, 29/33, 42/46, and 50 Draycott Place SW3
13/17A, 24/26, and 73/79 Cadogan Gardens SW3
Princes Gate Court SW7
Headstone Drive, Harrow – Station Z

4.2 – Air Ministry Premises since 1954

- a) In 1954 it was decided to vacate Adastral House, Kingsway and to take over the Ministry of Transport and Civil aviation building in Theobalds Road, Holborn. The name ‘Adastral’ was transferred along with the staff. This building had previously known as Ariel House – a name originally belonging to Marconi and Sheridan Houses in the Strand. The vacant Kingsway building was re-leased to Associated Rediffusion, and became ‘Television House’.



Plate 11: The location of the third Adastral House in Theobalds Road, Holborn
It is now in its redeveloped form (the red brick is original) Photos: 18–09–06

- b) The Air Ministry, on January 1 1956, comprised the following units, most being in the Kingsway / Whitehall / Theobalds Road area of London, (SW1, W1 and WC1). Staffing levels are shown.

Central London, (total 4,421):

Adastral House (1,028)
 Alexandra / Awdry / Princes / Imperial / York House (1, 445)
 Cornwall House (579), Horseferry House (338)
 King Charles Street (109)
 Metropole Buildings
 Northumberland Avenue (618)
 Parliament Square House (99)
 Queen Anne’s Chambers (50)
 2–8 Richmond Terrace (215)
 Sentinel House, Southampton Row (376)
 Strand (155)
 1–6 Tavistock Square (177)

Turnstile House (342)

Victory House (319)

Outer London Area, (total 930):

Stanmore (488)

Bromyard Avenue, Acton (337)

Hayes (46)

Provinces, (total 1,505):

Harrogate – Crown Hotel and Harlow Manor (787)

Dunstable (360)

Worcester (358)

- c) This represented a grand total of 6,826 personnel, 18 months later this had risen to 9,289.
- d) Earlier in 1947, on the site of the Montague House War Room in Whitehall, work had recommenced on the erection of the steelwork for the first phase of the new Board of Trade and Air Ministry building which became available for occupation in February 1951. The Air Ministry occupied the western side. The second phase and final phase was completed in 1959.
- e) In 1964 the Air Ministry ceased to exist and became part of the Ministry of Defence with its departments designated as MoD(Air). Today the building is the headquarters of the Ministry of Defence and is usually known as 'MoD Main Building'.



Plate 12: The Air Ministry entrance to the MoD Building, London.

Part 5 – The Wartime Command Headquarters

5.1 – Introduction

- a) Hillingdon House, Uxbridge had been the headquarters of the principal London defence unit since the 1920s. The Committee of Imperial Defence however ruled that Uxbridge was unsuitable, and that the C-in-C of Air Defence must be located close to the Chief of the Air Staff, and to 10 Downing Street. In 1933 under further pressure to move to central London a proposal was made to locate the ADGB HQ in a disused tube station, sites at the British Museum and Holborn being suggested. No action was taken at this time.
- b) Eventually the main command HQs were located close to, but not in London for security reasons. The factors governing their locations were:
 - Less than 50 miles from Central London and close to each other
 - Secluded / wooded site with no obvious landmarks which could aid enemy bombers
 - Within easy reach of an airfield, for communications purposes.

5.2 – Fighter Command HQ (FCHQ)

5.2.1 Pre WWII

- a) Fighter Command was formed from the ADGB at Hillingdon House. A move to more suitable premises was soon proposed, and following an unsuccessful attempt to locate the HQ at Hendon Golf Club, Bentley Priory at Stanmore, Middlesex was chosen. Formally a private girls' school it was reinstated having been used as the ADGB HQ ten years earlier. The site had been bought by the Air Ministry in 1935 for a cost of £27,500, which included over 30 acres of land. There had been strong opposition to its purchase as it was felt to be far too big, and the RAF's estimate of needing accommodation for 34 officers, 38 airmen and 74 civilians was extravagant. An Operations Room was soon installed in the Priory, however the importance and vulnerability of the site meant that significantly more secure facilities were urgently needed.
- b) An underground Operations Block was priority and construction began at the beginning of 1939. It would take 15 months to complete and involved the removal of 58,000 tons of earth and the addition of 17,100 tons of reinforced concrete. The complex was accessed from an entrance adjacent to the Priory, via a 30 metre tunnel equipped with gas-proof doors. Protected from a direct bomb-strike via two reinforced concrete burster layers, the block was equipped with its own electricity supply and gas filtration plant.
- c) In February 1939 the Air Ministry required a standby Fighter Command Operations Room which could take over in the event of the Priory being put out of action. A prime requirement was for ample communication facilities, hence the GPO favoured Leighton Buzzard, as it was the place where the Air Ministry's central telephone/teleprinter exchange was fast approaching completion. It was equipped with an underground bunker and was first manned in November 1939, but it soon gained more importance for its secondary role, that of being a training centre for operations and filter personnel.

- d) The main Priory site quickly was transformed from being an isolated large house in an extensive estate, to a sprawling mass of temporary hutting. It had in effect become a small town with messes and a cinema. ‘*Glenthorn*’⁴³ a large country house just to the east of the priory became the headquarters of AA Command, the Filter Room was constructed in *Hill House*, another neighbouring large house, and over a hundred huts were built to accommodate the two adjacent HQs. The communications airfield was Northolt, and the AOC’s private residence was located at ‘*Montrose*’, Gordon Avenue, Stanmore.
- e) Further standby facilities were then sought, and a second Fighter Command Operations Room became available at *Bucknells*, Garston, near Watford, where the adjacent Manor was selected as a reserve for AA Command’s HQ.

5.2.2 WWII and The Battle of Britain

- a) The Filter Room and Operations Centre in the Priory was visited by the Prime Minister and Chief of the Air Staff in November 1939, and by the Duke of Kent the following January.
- b) On 9 March 1940 work began to finalise the underground Operations Building. This involved transferring 167 telephone lines from the existing operation and filter rooms in the Priory to the bunker. It was achieved in just 150 seconds. The principal teleprinter links, (four intelligence and two Home Office) were also transferred ‘instantly’, and a further sixteen teleprinters were moved later in the day, when a two position Defence Teleprinter Network (DTN) was opened.
- c) Two days later at 13.30 hrs the underground HQ was fully manned for the first time. The new PBX was commissioned, the transfer of 250 extensions and 70 lines and private wires from the Priory being completed in less than a minute. The principal communication lines to the block were carried in steel pipes, buried six feet below ground to three remote concrete pillboxes. The latter were interconnected, such that the signals could be re-routed in the event of damage to any one buried pipe. These pipes effectively linked the following buildings, all of which were situated within the grounds of the Priory:
 - The Priory
 - The underground Operations Room
 - The Retelling Office
 - Glenthorn
 - The main Filter Room at Hill House
 - Associated W/T Stations.
- d) The strategic importance of this site was such that in May 1940 three more locations had been investigated and selected as emergency operations rooms, and were subsequently equipped with essential equipment, plus landline communications with the Air Ministry and other crucial organisations. They were codenamed ‘*RADIUM*’ and ‘*MAGIC*’ (occasionally referred to as *MANOR*). The former location has not been traced, however it soon moved to Aldenham Country Club. The latter could possibly refer to Garston Manor. Radium received its first staff in June, 17 men being billeted in the locality. By June 1940 it was reported that Radium, Magic and Leighton Buzzard were all fully manned and available as emergency operation centres.

⁴³ ‘Glenthorn’ is the usual name used by the military, despite all maps of the period depicting ‘Glenthorne’

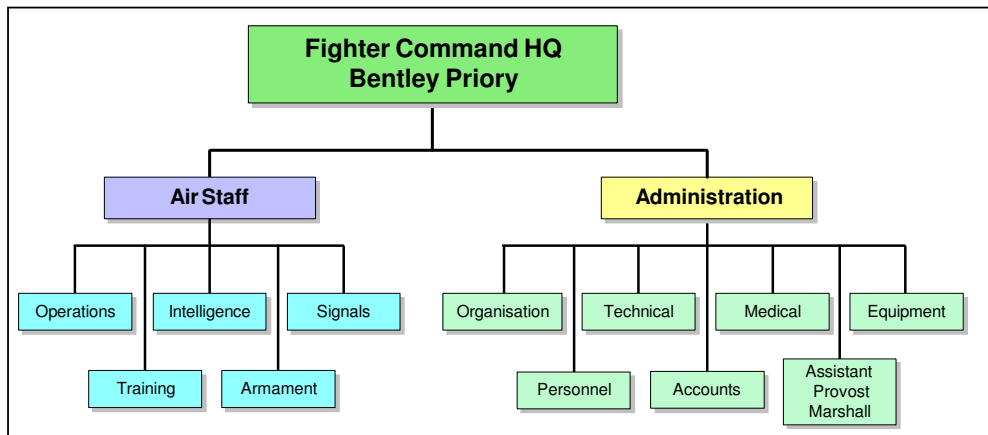


Fig. 18: Fighter Command, Branch Organisation, January 1940

- e) The underground block, now known as '*The Hole*' received a number of eminent visitors during the Battle, these included the Duke of Kent in July, and Sir Charles Portal, Chief of the Air Staff in October. The Prime Minister visited three times during the height of the Battle in August. On the first occasion he was accompanied by his wife, and on the second by Lord Beaverbrook (recently appointed Minister for Aircraft Production). On 6 September 1940 the King and Queen watched a Luftwaffe raid being plotted in the underground HQ, before lunch in No.1 Officers' Mess.
- f) Communications issues between the various units associated with FCHQ were proving increasingly onerous, such that early in 1940 No.60 (Signals) Group was formed to distance this task from the HQ itself. The new group also assumed responsibility for all Chain Home (CH) radar stations, known throughout the period as Air Ministry Experimental Stations (AMES). Later in November as a result of 'bottlenecks' experienced during the Battle, it was decided to decentralise the Hill House Filter Room, and all groups (excepting No.11) were each given their own filter room. Hill House remained under the control of FCHQ until 1942 when responsibility was transferred to 11 Group HQ, in line with other units.
- g) Together with No.11 Group Operations Room at RAF Uxbridge, virtually the entire Battle was controlled from these two underground facilities, plus Hill House. From the end of 1940 to 1945 the responsibility of 60 Group increased significantly as more radar stations came on line, particularly large numbers of Chain-Home-Low, and Extra-Low (CHL and CHEL) units. Ground Controlled Interception (GCI) stations were introduced from late 1940 to intercept aircraft which had penetrated the defences as CH systems were only 'outward-looking'.

5.2.3 Preparations for D Day

- a) With the gradual annihilation of the Luftwaffe there was a welcome decrease in pressure on the UK air defences from 1943, and the function of FCHQ changed accordingly moving towards a more aggressive role as preparations for the invasion of Europe became finalised. Extra accommodation was needed and nearby mansion '*Kestrel Grove*' a few hundred yards to the north-east in Hive Road was requisitioned. To improve communications a small landing ground, consisting of a pair of 300 yard strips was added to the site; the Air Ministry had estimated 6 months to complete the job, but with urgency being the key it was done in just four days by an American engineering unit.

- b) The underground command centre also saw a new life as D-Day approached, becoming the main Operations Room. Once again it was home to several VIPs on June 6, including King George VI, Winston Churchill, and General Eisenhower.
- c) The period from 1945 to 1949 saw the production of a series of paper exercises and reports investigating the nation's defensive arrangements. The Cherry Report (1945) identified weak points in the control and reporting system which had been developed during WWII, and suggested both short and long term improvements. Overall the outlook was very positive, the reality was very different, and a report into the ground radar infrastructure in 1949 concluded that the UK's air defences were in a very critical state and that the Britain was practically defenceless if no warning of an attack could be given.⁴⁴ Furthermore up to one month would then be required before any effective air defence could be launched.
- d) The activities of Bentley Priory in the Cold War are described later in this document.

5.3 – Coastal Command HQ

- a) There was pressure on Coastal Command, on its departure from Tavistock Place to remain close to the Admiralty in Whitehall, but the RAF relinquished this and moved into the outskirts.
- b) In 1938 the Air Ministry purchased the Château de Madrid, which had recently been renamed the *Eastbury Park Hotel* in Northwood Middlesex, (later Hertfordshire). It comprised nine acres of well wooded and very secluded land. One month later, a further 18 acres were purchased and in October it was accepted. A communications airfield was immediately available at Northolt.
- c) An interim Operations Block, consisting of a buried Nissen hut covered in concrete, was constructed along with a number of temporary buildings, but plans to build a permanent block did not materialise until 1944. The site was known as Eastbury, Eastbury Park, and Northwood.

5.4 – Bomber Command HQ

- a) Bomber Command was formed at Hill House, Uxbridge and in late 1936 it was told to move to temporary accommodation as soon as possible. The Air Staff were insistent that a country house would suffice as its HQ since, '*Heavy bombing of Bomber Command Headquarters would not result in interference of the bombing program.*'⁴⁵ The command itself however had different ideas and investigated a number of possibilities elsewhere. The initial constraints were that it must be within 50 miles from Whitehall, near an aerodrome, and relatively close to Fighter Command's HQ.
- b) A preliminary survey suggested two sites close to Halton Aerodrome at Aston Clinton and Dunmore might prove suitable, but these were dropped in favour of a secure wooded complex to the north of High Wycombe called Upper North Dean. This was approved in February 1937. The name was retained for a period, but by 1938 it had become Walter's Ash.⁴⁶ Strangely despite a priority requirement no adjacent airfield was available for some period until Booker (Wycombe Air Park) became available. While the site was being developed the command HQ

⁴⁴ Air 2/5773

⁴⁵ AIR2/1872

⁴⁶ The apostrophe was later dropped, and the site has since been known as Walters Ash.

moved from Uxbridge to Bridge House and Northside – temporary accommodation at the junction of Langley Road and Station Road at Langley Marish in Buckinghamshire.

- c) In March 1940 the HQ relocated to the new site at Walters Ash. The entire facility was concealed in wooded country and contained an underground operations room. The location was codenamed ‘*Southdown*’, and to preserve security the postal address referred to a location some five miles away. The term ‘Walters Ash’ was never used during WWII. Other names used for the site are: High Wycombe, Naphill, and (Upper) North Dean.
- d) Shortly after opening the staff HQ totalled 237 personnel and consisted of one Air Marshall, one Air Vice Marshall, two Air Commodores, seven Group Captains, 23 Wing Commanders and 38 Squadron Leaders. The AOC’s private residence was at *Springfields*, Great Kingshill, located three miles to the east of the HQ.

5.5 – Combined Operations HQ

- a) Three Area Combined HQs were required to support the Royal Navy bases at Plymouth, Chatham and Rosyth. These would control maritime aerial activity over the Atlantic, Channel and North Sea areas. The first two would be under the control of the Navy, while the latter would be principally RAF with a number of RN liaison officers.
- b) A suitable site in Scotland close to the Rosyth base was found at nearby Pitreavie Castle, and an early requirement was for a secure operations block. There was much disagreement between the forces regarding this building. The Navy insisted that the block should be capable of surviving a hit from a 500lb bomb, whereas the Air Ministry with their usual need for haste and cost-saving, suggested that protection from a 25lb bomb would suffice, and would enable the block to be built in a much shorter time. They were over-ruled and the Navy’s case was adopted. The bunker took three years to build and was operational by 1942.
- c) The major activity of the unit was in planning raids against enemy shipping particularly in Norway, and the most significant event was the hunt for the Tirpitz. Noteworthy visitors included King George VI, Winston Churchill, King Haakon of Norway, and Lord Trenchard.

Table 5 – Features of Protected Operations Blocks				
All dimensions are in metres				
Location	Uxbridge	Northwood	Stanmore	Pitreavie
Command	11 group	Coastal	Fighter	Combined
Floor Area – m ²	720	1,510	840	2,170
Volume – m ³	4,825	7,750	10,300	12,300
Depth from ground level	9.2	7.9	11.6	9.2
Roof Thickness	1.2	1.2	1.4	1.5
Floor Thickness	1.2	1.7	1.4	1.7
Wall Thickness	0.9	1.1	1.2	1.7
No. of Burster Layers	1	1	2	2
Layer Thickness	0.6	1	2.5	2
Entrance Passage length	12	7.5	30	?
Outer Walls	Single	Double	Single	Single
Cost £ 1,000	80	116	125	>400

Deliberately Blank

Part 6 – RAF Airfield Construction Service

6.1 – Beginnings, 1939–1942

- a) Airfield construction was first undertaken by RAF units in France in late 1939. A number of aerodromes were required for pilot training in the Loire area, and as the army had refused their assistance in the matter as it was outside their area of operation, an engineering unit was formed to manage this task.
- b) Designated No.1 Works Area (France), the unit consisted of 50 officers and NCOs and was responsible for the design, contract management, and supervision of camps and airfields in the Loire. The HQ moved from Vendome to Blois, then managing two 'divisions' of roughly 20 men in each area. By the early summer of 1940 some six airfields were well under construction, despite serious problems involving language and transportation issues. They were also assisted, with some reluctance, by the British Army who were tasked with moving constructional equipment from railheads to sites, but regarded the work as being outside their geographical area. The relatively sudden advance of the enemy however, clearly curtailed all activity and the unit returned to the UK in mid June, whereupon it was disbanded. Though short-lived the unit had laid the groundwork for RAF requirements in the future.
- c) Until the end of 1940 the task of repairing damaged RAF airfields was undertaken by the Works Directorate Civilian Repair Organisation, with much support from the Royal Engineers, (Pioneer Companies). These Companies were now required for other work, and as a result of the severe damage which had been experienced during the Battle of Britain, the Air Ministry appreciated the continuing need for a civil engineering facility. In July this resulted in the formation of its own specialised units, with a central HQ at Adastral House, London.
- d) The first unit consisted largely of the recently disbanded French entity; it reformed in Bristol on 22 July 1940, named No.1 Works Area (Field), with its HQ at Downleaze, Sneyd Park. Initially a division was formed at Weston-super-Mare, followed by a second unit at Lostwithiel, Cornwall. These units constructed a number of airfields in the south-west of England in late 1940 and early 1941. Most were grass, but a few had hard runways, Predannack being probably the most advanced.
- e) The new organisation consisted of both RAF staff and newly recruited civilians, who would in effect mirror the work of the Royal Engineers. Since the most likely area for their use was in the south-east, the first two squadrons were formed with HQs at Northwood and West Drayton. Each controlled ten flights which were located on airfields within the area. Within each flight a team of both skilled and unskilled workers had two distinct functions:
 - To undertake rapid repair of the airfield if damaged, the equipment necessary being obtained from a mobilisation store.
 - To provide additional works services if required, the materials and plant in this case being supplied by an existing Air Ministry Works Department (AMWD) unit.
- f) Further expansion resulted in the installation of a flight on every operational station, which needed more and more works squadrons – eventually a total of twenty located in the 20 (AMWD) areas. By 1942 the original obligation for rapid airfield damage repair had diminished to such a low level, that the prime objective of the flights now became the construction of new airfields.

6.2 – Structure

- a) In 1940 the organisation consisted of a small number of works squadrons, each of which had a headquarters controlling ten works flights. The latter was a unit of some 80 men, led by a warrant officer, and were largely unskilled. They were under the supervision of a relatively small number of officers, again many of whom were unskilled.
- b) The flights were numbered from 4620 to 4850, and later a number of specialised flights were set up and used numbers above 4850. These units were principally involved in:
- Mechanical and Electrical Construction – power house and plant installation on airfields and other sites
 - Mechanical and Electrical Maintenance – including operation of the above
 - Field Plant – transportation and maintenance of heavy items, bulldozers, excavators etc)
 - Quarrying – obtaining resources for major constructional projects
 - Well Boring – shaft sinking for water supplies to remote areas.
- c) By the end of 1941 six works squadrons had been formed, however it was realised that a significantly larger number would be required (certainly 12 initially), and these would then become unmanageable without the formation of intermediate level structures. These became the wings, six of which eventually existed in the UK. Each would be responsible for three squadrons in its geographical area.

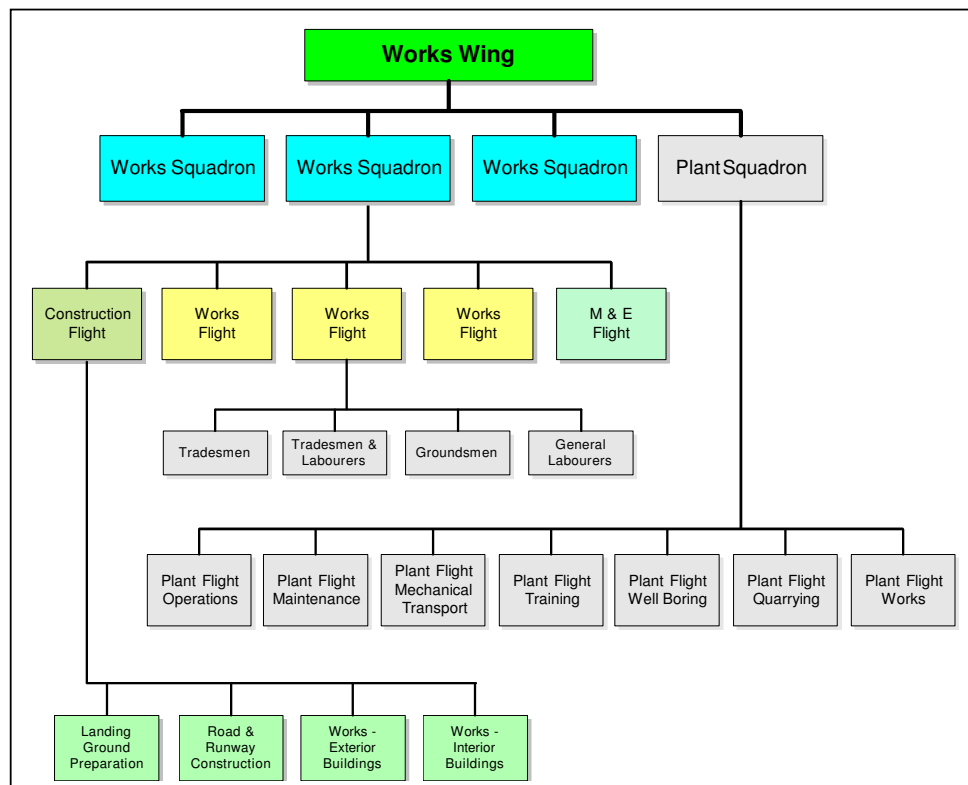


Fig. 19: Squadron and Flight Structure of an Airfield Construction Wing

6.3 – Expansion

- a) A name change in June 1943 resulted in the units being redesignated Airfield Construction Squadrons, and these were renumbered by adding 5000 to the existing designation, hence 10 Works Squadron was now 5010 Airfield Construction Squadron. The organisation was now officially known as the Airfield Construction Service (ACS).
- b) The Wings also became Airfield Construction Wings, and were allocated accordingly:
 - 5351 Wing – Hatfield and St Albans
 - 5352 Wing – Cambridge
 - 5353 Wing – Bristol
 - 5354 Wing – York
 - 5355 Wing – Baginton / Coventry
 - 5356 Wing – Glasgow
 - 5357 Wing – Elstead Common / Guildford, (formed much later).
- c) The squadrons were also renumbered on a similar basis:
 - The 28 RAF squadrons were numbered 5001 to 5028
 - The Polish squadron became 5029
 - Two further 2 RAF squadrons became 5051 and 5053
 - The six Mechanical and Electrical Squadrons were numbered 5151 to 5156
 - Seven Plant Squadrons were redesignated 5201 to 5207.
- d) Flights were then renumbered by adding 4600 to the existing designation.
- e) The overall command of the ACS came from Air Ministry Works Directorate W10, which was located in Bush House, Aldwych, London WC1. It was responsible for organising the work load and tasks of the squadrons, though strangely the overall responsibility of many other tasks such as recruiting, equipping, and unit movements was performed by AMWD itself which resulted in much friction between the former and W10.
- f) Early in 1943 a Plant Depot was formed at Mill Green, Hatfield, Hertfordshire, with a storage facility at nearby Twentieth Mile Bridge. The agreed holding of this unit was the equivalent of two construction wings.
- g) By mid 1943 each wing of the ACS had been equipped with sufficient plant and transport to allow them to construct a complete bomber airfield in a three month period. This included all runways, taxi tracks, hardstandings, and buildings.
- h) As plans for D-Day emerged, a major new task was given to the ACS, which resulted in the construction of 23 Advanced Landing Grounds (ALGs) in Kent, Sussex and Hampshire from which fighter and fighter-bomber squadrons were able to operate over the Channel, and later the D-Day beaches.
- i) After D-Day most of the units moved into France, where they were concerned with the repair and construction of landing grounds in the front line.

- j) By the end of WWII, the ACS consisted of:
 - 8 Airfield Construction Wings
 - 29 Airfield Construction Squadrons
 - 7 Specialised Plant Squadrons
 - 3 Mechanical and Electrical Squadrons.
- k) Overall some 30,000 personnel were involved, together with almost £3 million pounds of plant, equipment, and tools – an enormous amount considering the period.
- l) Each squadron had within it a very large number of trades and professions, previously involved in the civilian building and construction industry. In addition RAF trades such as cooks, clerks, and medical personnel etc were attached to a flight or squadron. This mixture proved essential under war time conditions when a unit arrived on a station to carry out a project, or to repair bomb damage.

6.4 – Post WWII

- a) An Air Council decision in 1947 agreed to retain the ACS, with a staff reduction down to 2,000, of whom 893 would be specialists. The following year the organisation was renamed again, now becoming the RAF Airfield Construction Branch (ACB). One year later the Harwood Committee recommended the disbandment of the ACB within four years. The decision was strongly contested by the Director General of Works, and an agreement was reached to reduce the number of personnel to 1,500.
- b) As a result of Cold War tension, and the requirements for airfields in Germany, the staff was dramatically increased again – to 7,500 in 1950 – followed again a year later by another change in direction when the Melville Committee recommended that the peace-time level of the service should be retained at 7,500. This would include 4,850 ACB personnel, with an additional 5,000 reservists, plus a further 1,000 auxiliaries (of whom 650 would be ex ACB tradesmen).
- c) From 1950 to 1957 the ACB built and maintained all the RAF's airfields and other installations in Germany. The remaining wings were then disbanded. One major project undertaken in 1957 was the construction of a road, and technical and domestic buildings on the uninhabited island of St Kilda. From then until 1966 the remaining squadrons supported RAF operations, typically in the Middle and Far East until the mid 1960s.
- d) In 1948 the Mill Green facility was closed, all units including 11 officers and 308 airmen relocating to Church Lawford Airfield. The move took six months, and involved 7,500 tons of plant and 562 road journeys – a total of 83,000 miles. Eventually Church Lawford became known as the Airfield Construction Depot. The Plant Depot, 5002 Airfield Construction Squadron, and 5708 Mechanical and Electrical Wing were also based at the site.⁴⁷ An urgent requirement was for a Plant Training Area, and a base was found at Ryton-on-Dunsmore, some five miles to the west, where offices and a workshop were constructed.
- e) In 1953 the AC Depot, plus training wings moved to Wellesbourne Mountford; the Ryton training site proved to be too far away for realistic communications, and after a lengthy search

⁴⁷ Plant Depot later became the 'Plant Holding and Repair Depot'

a replacement was found at Claverdon Quarry, some ten miles to the north-west. This was equipped with a camp containing a hangar, training rooms, and mess facilities. Amendments were made to the training courses to cater for recent changes in revised engineering practices and operational requirements. Site expansion resulted in Church Lawford being reinstated as a sub-site.

- f) The final move of the unit came in 1963, when all sections of the AC Depot moved to Waterbeach Airfield. A rationalisation under the new Ministry of Defence resulted in the disbanding of the ACB, all responsibilities being handed over to the Royal Engineers. A lengthy handover, which involved a substantial training programme, eventually resulted in the closure of the ACB on 1 April 1966.

Part 7 – The RAF Regiment

7.1 – The Armoured Car Companies

- a) The need for a defence system for the RAF was first realised just after WWI, when an unstable situation had arisen as a result of the fall of the Ottoman Empire. Lord Trenchard was responsible for instigating the formation of a number of units which would assist in policing very large areas in the Middle East. The force consisted of two components, one airborne and the other ground based. The latter would utilise the Rolls Royce Type A Armoured Car, which was based on a Silver Ghost chassis with an upgraded suspension to bear 3½ tons of 7mm armour plating. The ground units would be staffed and controlled by RAF personnel.
- b) In December 1921 No.1 Company was formed at Heliopolis, followed by No.2 Company four months later. A third unit appeared at the end of the year at Basra to cover Eastern Iraq. No.2 Company was intended for service in Transjordan, however it was finally deployed in Amman. Six companies were eventually formed by 1922, with a wing at Hinaidi. The life of these companies varied and is shown below:
 - No.1 ACC, 1921–23 and 1930–46
 - No.2 ACC, 1922–46
 - No.3 ACC, 1922–25
 - No.4 ACC, 1922–27
 - No.5 ACC, 1922–27
 - No.6 ACC, 1922–27
 - Armoured Car Wing, 1927–30.

7.2 – The Creation of the RAF Regiment

- a) No further involvement or interest was shown until the beginning of WWII. Though warning bells began to ring after Dunkirk, followed by the loss of Norway and Greece, it took the fall of Crete, when the RAF was unable to defend its airfields to spur the Air Ministry into immediate action. The army was stretched to the limit and, following an analysis into airfield security by the Findlater Stewart Committee, it was decided to create a new unit the 'Royal Air Force Aerodrome Defence Corps'. These units, specialising in airfield defence would require up to 79,000 officers and airmen, but would release 93,000 soldiers for other purposes.⁴⁸ On 1 February 1942 this new Corps was officially formed. The name became the Royal Air Force Regiment (RAFR). Established by Royal Warrant, its motto was '*Per Ardua*', translated as '*Through Adversity*', with its insignia crossed by two Lee Enfield rifles encircled by a crown.
- b) Two months later the RAFR Depot was established at Belton Park, Grantham, Lincolnshire, and soon training schools for airmen and NCOs were established at Filey, Hednesford, Locking, Ronaldsway and Whitley Bay. Eventually Ground Defence Training Centres were constructed at Arbroath, Hereford and Skegness, with an artillery school at Eastchurch.
- c) The initial requirement for the regiment would be to provide anti-aircraft flights at 329 airfields, plus field squadrons at 147 RAF bases.

⁴⁸ Later amended to 50,000

7.3 – WWII Organisation and Structure

a) Prior to October 1942, the Regiment had a variety of squadron arrangements (three principal ones shown below, plus a number of variants). After October this was simplified to just two:

- A Field Squadron: 185 men including 7 officers
- An independent Anti-Aircraft Flight: 58 airmen, plus 2 officers.

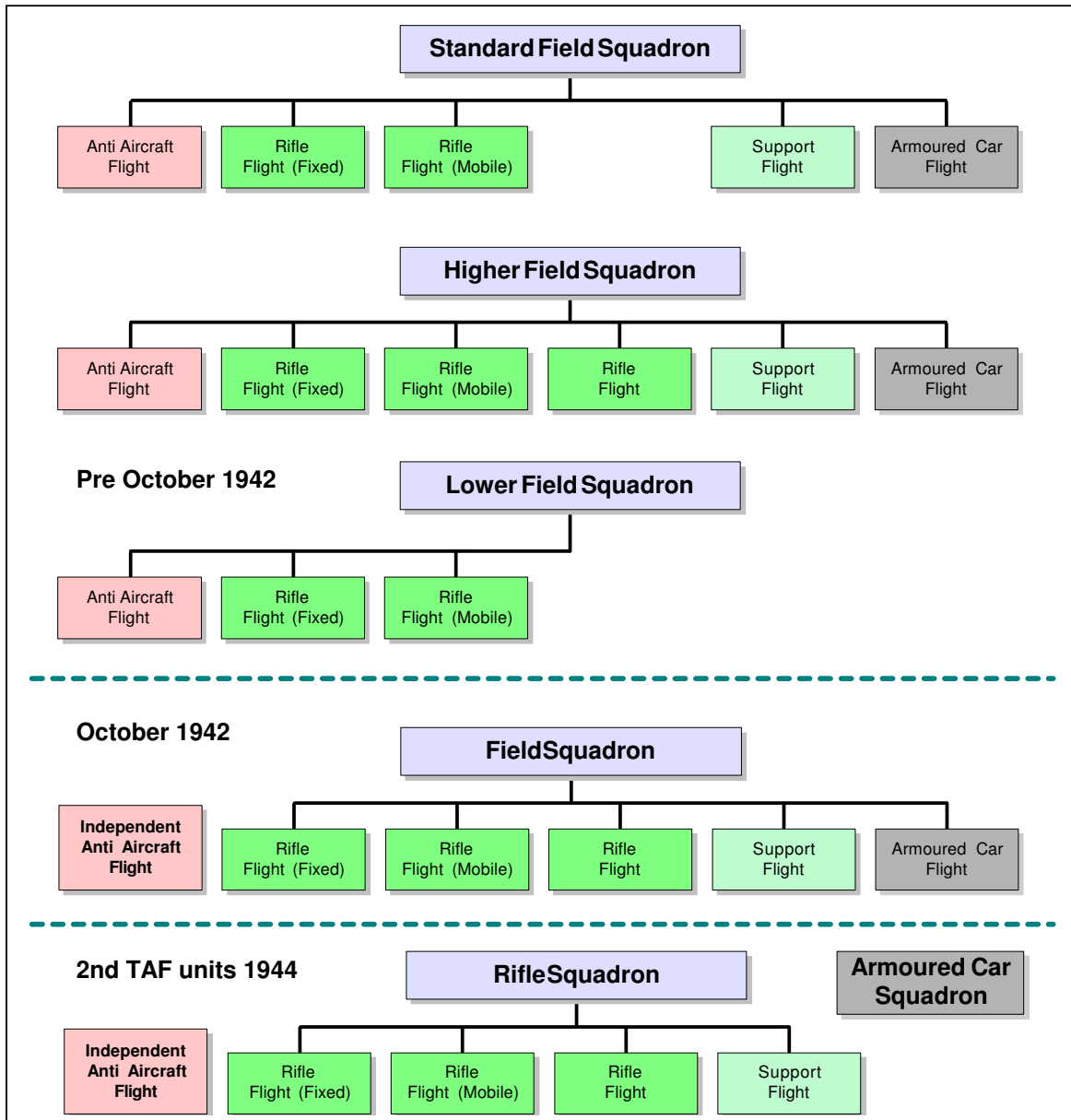


Fig. 20: Organisation of RAF Regiment Squadrons and Wings in WWII

b) Seven months later the AA flights were gradually transformed into Light AA Squadrons, with 162 airmen and 8 officers. The armament too changed from machine guns, through 20mm Hispano cannon, to the Bofors 40mm gun.

- c) The first major offensive undertaken by the RAFR was for Operation Torch, the invasion of North Africa. No.333 Group was formed, with its HQ at Norfolk House in St James's Square, to plan the RAF involvement. Almost 3 000 officers and airmen took part, and their assembly point was No.1 Transit Camp, West Kirby, Liverpool.
- d) The only WWII action experienced in the UK was witnessed in Operation 'Diver', the attack on England using the V1 'doodlebugs'. This involved a substantial number of units – actually 68 squadrons – being deployed in south-east England. The Regiment's Light Anti-Aircraft (LAA) guns operated along side the LAA and HAA batteries of the Royal Artillery.
- e) Most of the active involvement by the Regiment during the Second World War took place overseas; Egypt, Iraq, Syria and the Western Desert being typical campaigns, before Overlord. As a contribution to the invasion force, 38 squadrons became part of 2 TAF, this number increased to 75 by the end of the war.
- f) During preparations for the Invasion, the Field Squadrons which were attached to the Second Tactical Air Force were renamed Rifle Squadrons. This involved removing their Armoured Car Flights, and combining a number of these into a separate Armoured Car Squadrons (see previous diagram).
- g) At the end of WWII there were 280 squadrons, with a total workforce of 66,000. Six of these were the Armoured Car units, each of which was located in a separate area to provide protection for a number of airfields. The Wing structure was created in 1944, and units were numbered from 1300 through to 1338. They were very short lived, many being disbanded in 1946 – all by 1947. Belton Park, the Regiment's depot, closed in August 1946.
- h) The Wing Headquarters were:
 - 1332 Bradwell Bay Jan 45 – June 45
 - 1333 Manston Dec 44 – June 45
 - 1334 Hawkinge / Kenley? Jan 45 – June 45
 - 1335 Kenley Jan 45 – Sept 45
 - 1336 Detling Jan 45
 - 1337 Colerne Jan 45 – Oct 45
 - 1338 Detling Jan 45 – Oct 45.

7.4 – Post WWII

- a) In 1947 with tensions mounting once again Europe, five RAFR Wings were formed in Germany. More were added, some in the UK and within five years 18 were in service. Reductions took place starting in 1956, and by the end of the decade only four wings remained. Overall these four wings would then remain until the early 1990s, albeit with some temporary gaps, plus the reformation of an older unit.
- b) As had been the case in WWII the vast majority of action took place overseas, frequently with skirmishes resulting from the run down of the British Empire. Other theatres of operation have been : Palestine, Aden, Suez, Cyprus, Malaya, Indonesia and Oman, Northern Ireland, the Falklands, Kuwait, the Balkans, Afghanistan, and Iraq.

c) All wings which had any UK involvement are shown in the following table.

Table 6 – RAF Regiment Wings in the UK – Post WWII				
Wing	Formed		Subsequent History	
2	Jan 48	Upavon	Disbanded Upavon, Mar 51	
	June 51	Yatesbury	To Germany, Sept 51	Disbanded Germany, Jan 58
3		Overseas	To Catterick, 1973 / 1975 ?	?
4	Dec 73	Catterick	Moved overseas	Disbanded ?
5	Sept 51	Yatesbury	To Egypt, Aug 51	Disbanded, Jan 64
	Apr 67	Bicester	To Wittering, Oct 70: Hullavington, Oct 82	Disbanded, July 90
6		Overseas	Reformed West Raynham, July 83	Disbanded ?
7	Oct 51	Yatesbury	To Germany, same month	Disbanded, Sept 57
8	Nov 52	Yatesbury	To Egypt, next month	Disbanded, Nov 60
21	Jan 52	Pembrey	To Ouston, Sept 52	Disbanded, Oct 53
25	Jun 52	Hawarden	To Germany, next month	Disbanded, Jan 58
33	Oct 52	Innsworth	To Felixstowe, ?–Jan 60: Upwood, July 62, Catterick, Apr 64	To Germany, July 73 Disbanded ?
38	Sep 52	Hawarden	To Germany, next month	Disbanded, May 57?
55	July 52	Hawarden	To Germany, next month	Disbanded, Jan 58
1332	Jan 45	Bradwell	Disbanded Bradwell Bay, Sept 45	
1333	Jan 45	Manston	Disbanded Bradwell Bay, Sept 45	
1334	Jan 45	Kenley	Disbanded Gatwick, Sept 45	
1335	Jan 45	Kenley	Disbanded Gatwick, Sept 45	
1336	Jan 45	Detling	Disbanded Norway, July 45	
1337	Jan 45	Colerne	Disbanded Gatwick, Oct 45	
1338	Jan 45	Detling	Disbanded Llanbedr, Oct 45	
Other Wings: 1300–1318, 1329 and 1330 were also believed to have formed in the UK, but rapidly moved overseas, and were eventually disbanded there. 1319–1328 were formed overseas				

7.5 – Recent History

- a) The role of the Regiment has changed little since its conception. Weapons and equipment however have modernised, and the Air Defence Squadrons were eventually equipped with Rapier surface-to-air missiles. The field squadrons have alternated with both armoured vehicles and Landrovers. For example they currently are equipped with the mortar, being transported by Land Rover – as was the situation in much of WWII. In the early 80s however they reverted to armoured vehicles (Scorpions, and Spartans). In 2005 the HQ of the Regiment was at RAF Honington, and was controlled by 2 Group, Strike Command. It consisted of a relatively small number of squadrons, being of two principal types, plus ancillaries.

7.5.1 Field Squadrons

Six squadrons were recently in operation:

- No.1 Sqn. Originally the 1922 Armoured Car unit was based at RAF St Mawgan
- No.2 Sqn. The parachute capable squadron was based at RAF Honington
- No.3 Sqn. Based at RAF Aldergrove it had a specialised role as the Squadron engaged on Internal Security duties. It was tasked primarily with the protection of its military air-head in Northern Ireland
- No.34 Sqn was located at RAF Leeming
- No.51 Sqn was at RAF Lossiemouth, Scotland
- No.63 Sqn. This unit, based at RAF Uxbridge, operated as a conventional RAFR squadron, and as a ceremonial section as the Queen's Colour Squadron.

7.5.2 Rapier Squadrons

There were four Ground Based Air Defence Squadrons, each equipped with the BAe Rapier FSC missile system. The Squadrons also maintained a detachment providing ground-based air defence in the Falkland Islands:

- Nos.15 and 16 Squadrons were based at RAF Honington, the RAF Regiment depot
- No.26 Squadron was at RAF Waddington
- No.37 Squadron was at RAF Wittering.

7.5.3 Ancillaries

No.27 Squadron was the Biological Warfare Detection Squadron, based at Honington.

Survive to Operate (STO) Units:

- No.1 Tactical STO HQ RAF Wittering
- No.2 Tactical STO HQ RAF Leeming
- No.3 Tactical STO HQ RAF Marham
- STO Training Centre RAF Honington.

These units provided integrated Force Protection (FP), Command and Control (C2) support to any deployed RAF operation.

There were also six Royal Auxiliary Air Force Regiment Squadrons:

- 2503 (County of Lincoln) Waddington
- 2620 (County of Norfolk) Marham
- 2622 (Highland) Lossiemouth
- 2623 (East Anglian) Honington
- 2624 (County of Oxford) Brize Norton
- 2625 (County of Cornwall) St Mawgan.

Footnote: From available sources, including current web sites, there is a high degree of contradiction and lack of reliable data regarding the RAF Regiment. The above information is believed to be correct.

Part 8 – Royal Observer Corps

8.1 – Development

- a) As a direct result of the sudden increase in enemy aerial activity over the UK around the middle of WWI, a need arose for a dramatic improvement in operation of the London Air Defence Area. As early as 1915, enemy airships had been able to enter this area with impunity, and by early 1916 not one had been intercepted. Major-General Ashmore was responsible for developing a new organisation – the Metropolitan Observation Service. Manned largely by some 200 policemen equipped with primitive instruments, it was responsible for providing information as to the whereabouts of enemy airships and aircraft, the latter being a particular problem due to their high speed.
- b) LADA had its central control located at Horse Guards, London, and it processed messages received by telephone from observers to the relevant aircraft and artillery controls. Within a short space of time this primitive organisation had successfully ended all low-level nuisance raids, and was forcing the enemy to fly at very much higher levels or at night.
- c) Efforts to maintain some vestige of the organisation with its expertise at the end of WWI did not succeed, despite the fact that it had proved to be a vital component working with the guns, searchlights and aircraft. In 1922 the task of air defence was transferred from the War Office to the Air Ministry, though the former would be responsible for AA guns and searchlights, albeit under Air Ministry jurisdiction.
- d) One year later the air defence of the south-east was subject to a major overhaul under the Steel-Bartholomew plan, and once again a need for an observer organisation was forecast. In 1924 Ashmore was invited to submit a proposal regarding such an organisation, which resulted in a series of experiments involving the installation of trial observer posts centred around Cranbrook in Kent. The posts were installed on a new 'Grid' system, and operated with an experimental scheme of advanced reporting procedures.
- e) The new structure consisted of 44 posts each separated by a distance of some five to eight miles. Each post reported to one of two command centres or groups based in Maidstone and Horsham, the manpower coming from Special Constables. A series of successful exercises in June 1925, led to the expansion of the scheme to Hampshire and Essex, and then to the official formation of the Observer Corps that October. The unit came under the control of the Army, but on Ashmore's recommendation it was transferred to the RAF in 1929.

8.2 – Expansion

- a) Rapid expansion took place in the mid-1930s, such that most of eastern and southern England was overlaid by a network of observation posts some ten miles apart. By 1939 most of the mainland UK was covered, with the exception of Northern Ireland and some remoter parts of Cornwall, Scotland, and Wales. The posts reported to a total of 38 Group Operations Centres, which in turn reported to the local RAF Sector. As rapid communications was the essence of the Corps, the centres were typically located in, or very close to existing GPO telephone exchanges.
- b) Initially two command areas, Northern and Southern were formed in 1935. Two years later the unmanageable Southern Area split, the offshoot becoming the Western Area. The following

year saw the Northern Area splitting, producing the Midland Area. In 1941 another new unit, the North-Western Area was formed. There were now five command areas in England, however in 1943 the original northern unit closed, and was absorbed into the more recent Midland Area.

8.3 – Battle of Britain

- a) The Chain Home radar system was paramount in providing early warning information regarding impending enemy raids on the UK. This was soon augmented by Chain Home Low (CHL) – and later still by CH Extra Low – which, despite a significantly shorter range, detected raiders attempting to enter UK airspace under the cover of the main system. Once the raiders had crossed the coast however they were invisible to all RAF radar, and detection was then entirely down to the Observer Corps.
- b) On 9 April 1941, the value and professionalism of the Corps was rewarded by HM King George VI approving the change of title to Royal Observer Corps (ROC). The royal link was to remain for the life of the organisation.
- c) Throughout 1940 and 1941 the ROC was also instrumental in assisting many lost RAF aircraft to safety, albeit on a very casual basis, by observation and use of the telephone. During 1942 a number of posts were provided with TR9D communication sets, which previously had been used only on airfields as part of the ‘Darky’ system for helping aircraft to locate the airfield. This allowed observer posts to communicate directly to the aircrew, and thus provide instant information as to the position of the lost aircraft.
- d) The ROC was then given a new auxiliary function under the codename ‘*Granite*’. initially applied to a number of posts situated on, or near high ground. On spotting a friendly aircraft flying too low with respect to the surrounding terrain, they would fire red flares to warn the pilot. The scheme expanded, and by 1945 a total of 306 posts were using the system. By this time a number of posts in critical areas were operating a scheme called ‘*Augmented Granite*’ which used HF radio. It is known that well over 7,000 aircraft in distress were assisted by the ROC in this manner during WWII.
- e) Procedural changes became necessary in 1942, as the new radar aid Ground Controlled Interception (GCI) came on line. This was now the primary method of detecting enemy aircraft operating over the UK, and the future of the ROC looked uncertain. However the command remained unchanged, as it was soon found that the whole interception system improved with the introduction of telephone links between groups and GCI stations.
- f) Decentralisation of filtering information to the fighter groups now took place, with the ROC having a more significant role. In addition the centres now became responsible for generating air-raid warnings to various organisations.⁴⁹
- g) Another very important innovation was the introduction of the Long Range Board. This was another plotting table, mounted vertically, and using magnetic tokens. At half the scale of the unit’s own 1-inch per mile plotting area, it showed all the surrounding areas thus giving a valuable overview as to the exact situation in the vicinity. Manned by its own plotters,

⁴⁹ See later Fig 39

information was obtained from all the adjacent command centres, a pair of tellers also providing feedback to these adjacent units regarding activities in the home unit itself.⁵⁰

- h) The V1 flying bomb assault on the UK, which began in June 1944, generated a sudden increase in the workload of the ROC in Kent. The bombs were known as '*Diver*'. An improvement in the early warning system came with the arrival of an American Microwave Early Warning Radar installed at Fairlight on the south coast. This state of the art device was a distinct improvement in anything the RAF had at the time, and proved so successful that TRE rapidly produced the British counterpart (the Type-26), which was in service by September. Of the 9,000 V1s launched in the first phase (June to September), only 2,340 reached London, some 3,460 being intercepted via information generated from the ROC.
- i) The Luftwaffe was forced to use air-launched missiles from September as its Calais area launch sites had been over-run by the allies. This was known as the second phase and resulted in the expansion of the 'English front' to include the Essex ROC posts. Some 1,200 missiles were fired in this phase, the last one recorded being on 14 January 1945. A final attack on the UK was then initiated using extended range V1s launched from sites well behind the German lines in Holland. This third phase assault lasted only a few weeks and accounted for 275 bombs, of which 91 were shot down.
- j) The V2 missiles were a totally different problem, to which the ROC was virtually powerless, though they were responsible for recording the rocket trails which could be seen over Europe in excellent visibility conditions.

8.4 – The Aftermath of WWII

- a) Four days after VE day the ROC officially stood down, the extension being in place to ensure no renegade Luftwaffe units were still operational. This period of inactivity was to last only two years until Russian intentions in the West became obvious, with the introduction of the Iron Curtain. As at the end of WWII Britain's defences had shrunk to almost zero, and action was swiftly taken to get radar and the ROC back to operational level to counter a possible Soviet air attack. The radar rebuild took several years, hence emphasis was immediately on the ROC to provide defence in the short term. It too needed a rapid upgrade as all the training material in existence related to the Nazi threat and its aircraft, and clearly the emphasis was now on aircraft of the USSR.
- b) Very significant changes to the organisation of the service took place in 1953, when all existing areas were completely redefined and renamed. Scotland and Northern Ireland now became high priority units with the strong possibility of Russian Tu-4 'Bull' (B-29 equivalent) long-range bombers flying in from the north-west, over the Arctic Sea.
- c) The majority of WWII observation posts were no longer in existence, hence a new series of structures were commissioned and eventually constructed by the Orlit company. They produced prefabricated concrete buildings, roughly 3.5m in length and 2.5m wide. A Mark 2 version was produced which stood on concrete stilts. They were generally unpopular amongst the occupants, as they were unheated and cramped, but remained in operation until 1975, when underground posts entered service.

⁵⁰ See later Fig.40

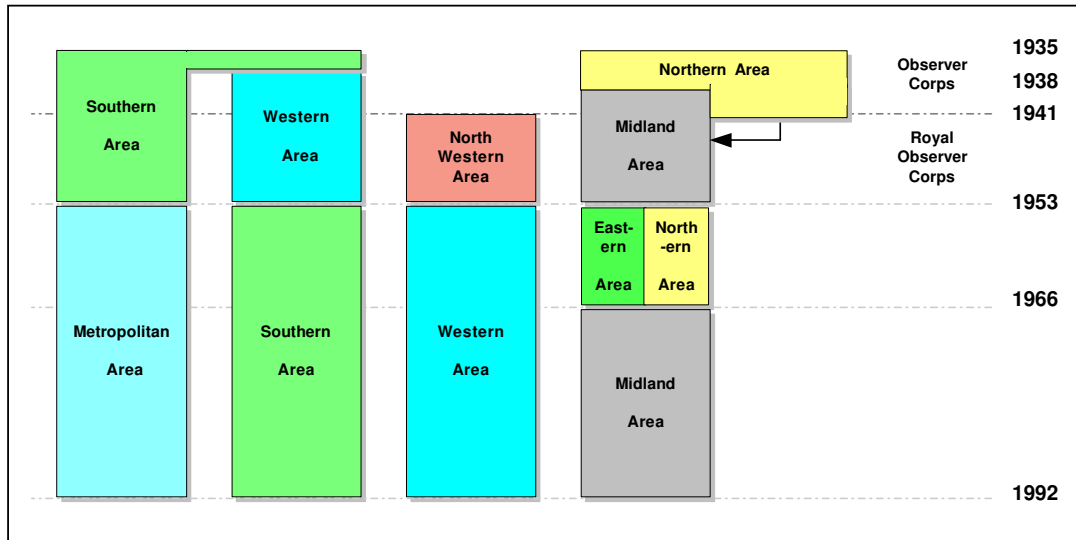


Fig. 21: Observer Corps Area Organisation, 1935 – 1992

- d) In the twenty years following WWII the role of the ROC diminished significantly. Their value in that conflict had been in identifying enemy raiders when the latter were out of radar range. By 1965 aircraft flew very high, or very low and fast, making visual identification almost impossible; the proven reporting system developed by Major-General Ashmore was no longer of use. Radar too had improved, and with the introduction of airborne warning systems by the RAF, it was now possible to detect low flying raiders. After a general run-down of the ROC reporting system, the final surface posts – some 280 mainly defending nuclear bases in East Anglia – were closed in 1965.

8.5 – A Change in Role

- a) In 1957 the work performed by the ROC would change completely. Their task in the future would be to monitor the effects of an attack on the UK. They would record the location, and intensity of a nuclear weapon dropped in the vicinity. This information would no longer be reported to the RAF, but the United Kingdom Warning and Monitoring Organisation. This was a new organisation staffed by a number of scientists responsible for assessing the effects of a chemical, biological, or nuclear attack; the latter being considered by far the most likely.
- b) Construction began on a series of underground reinforced-concrete observation posts, roughly the size of a caravan. By 1964 some 1,562 had been built across the UK. These posts were equipped with a number of instruments, which could determine the height and angle of an air-burst weapon, together with the explosive strength and radiation level of the blast. Though these buildings were much warmer than the old Orlits they had replaced, they suffered badly from damp, as few had been tanked to prevent water ingress, and many units resorted to fitting duckboards – reminiscent of the trenches. There was also the problem of sanitation caused by the Elsan toilet which lived in a cubby hole and had to be emptied on a regular basis. Ventilation too was an issue, as was food preparation – satisfactory cookers were never provided.
- c) The reporting system was designed by arranging the posts in clusters of up to four units, one of which would be the master. The latter communicated with the other units in its cluster by telephone, and with Group Control via VHF radio. Following an attack the readings from the

clusters would be plotted at Group and Sector Control Centres to confirm the 'ground-zero' points, to assess the damage, and display and forecast movements of radiation.

8.6 – Cutbacks

- a) The introduction of the submarine launched weapon (Polaris) in the late 1960s was a major change in the way in which the UK's defence system operated. The nuclear deterrent effectively passed from the RAF to the Navy. There was no immediate change to the ROC as it was still responsible for assessing and recording the effects of a bomb burst, however the original 1,562 posts were reduced to 876. The remaining ROC posts still remained on full alert with very frequent exercises to maintain standards, though it appears that the fact that modern missiles now were of a multi 'low-power' warhead type, and the training exercise were all based on a single high power weapon, was never communicated to the ROC.
- b) The effects of the Electro Magnetic Pulse (EMP) were also taken seriously into consideration. This is the massive release of high frequency radiation, resulting from a nuclear explosion which has the ability to destroy modern sensitive electronic equipment – in particular 'silicon-chip' semiconductor radio and monitoring equipment. Old electromagnetic equipment as used in telephone changes, and thermionic valve radios were immune to the blast. This means that most of the equipment in use by the ROC would be rendered useless in areas which were relatively close to the point of impact of a nuclear weapon.

8.7 – Stand Down

- a) Two changes contributed to the eventual demise of the ROC. Weapons had become much less powerful, but far more accurate and deadly, and available in much greater numbers. The instruments and revised reporting systems then in use were unsuitable to the new technology. This fact, together with the collapse of the USSR resulted in the bulk of the ROC being stood down in September 1991.
- b) The year of closure is often given as 1992, however a few elements remained until the end of 1995, and the headquarters was officially closed on 31 March 1996.

Part 9 – Aerodrome Defence Scheme Organisation

9.1 – Introduction

- a) In 1940 detachments of the Army were made available for the general protection of aerodromes against organised attack by enemy forces. The Station Commander was responsible for airfield defences and exercised local command of all available forces through his Defence Commander. All RAF personnel were required to bear arms and be trained in their use, they were assigned a role in the airfield defence scheme as integral members of the garrison.
- b) Initially the Army formulated a policy of governing the local defence arrangements such as the tactical layout of the Battle HQ and pillboxes, often arranged as clusters of defensive positions known as Defence Localities. The Army also drew up a plan of reinforcement and relief should the station come under attack. These defensive arrangements were formulated within the local Defence Scheme produced by the Station Commander. Over the course of the war they may have been several schemes issued at any one RAF station.

9.2 – Defence Scheme RAF Shawbury

- a) The Source of this information is:

Defence Scheme No.4 by Group Captain RJ Rivers, CO RAF Shawbury.

The date is unknown, but presumed to be after April 1942. Quoted grid references refer to the Cassini War Office False Origin (WOFO) grid, which was used up until 1945

9.2.1 Background

- a) RAF Shawbury had opened in February 1938 as a combined Aircraft Storage Unit (27 Maintenance Unit) and No.11 Service Flying Training School. The station not only included the airfield but a number of clusters each of three large storage hangars positioned at random off the main perimeter track and several aircraft dispersal fields located in the surrounding countryside with access tracks extending over several miles. There were also two Relief Landing Grounds that were the responsibility of RAF Shawbury. As an ASU/FTS, the airfield was classified as a Class IIc station.

9.2.1.A – General Outline of the Scheme – Objective:

- To prevent the capture and use of the aerodrome by the enemy and keep it available for our own use
- To protect stored aircraft.

9.2.1.B – Scale of attack:

- **Without Warning:** activities of small parties of saboteurs aiming at destruction of aircraft or communications
- **With Warning:** (after receipt of code word) attack by not less than one battalion of paratroopers aiming at the capture and use of the aerodrome, probably preceded by heavy low-level bombing attack. Success would be followed by airborne troops using aerodrome
- **Direct landing** on the aerodrome by paratroopers or armoured planes.

9.2.1.C – Personnel Available for Defence:

- a) These are given in detail in the table below and comprise:
- RAF Regiment (one lower squadron)
 - Army Detachment (one platoon)
 - Station personnel (four squadrons)
 - Home Guard (one company).
- b) The General Arrangement of the scheme was to bring the armed and effective forces into action with the least possible delay, and to organise the non-effective personnel so that they are available as station personnel as required. The scheme is divided into several parts.

9.2.2 Static Defence**9.2.2.A – Ground Defence**

- a) Defended Areas: the aerodrome defence is divided into:
- Defended Localities
 - Defence Posts.
- b) These are grouped, for the purpose of command, into four sectors.
- c) The task of the personnel allotted to the Static Defence of the aerodrome is to repel attack from outside the perimeter of the defended localities. All defended sectors are organised to bring fire to bear on the runways, so as to engage hostile aircraft and airborne troops at the time of landing. All localities are wired and will be defended to the last round and the last man.

Table 7 – Allotment of Static Troops			
Sector	Unit	Defended Localities	Strength
No.1 Shawbury	No.5 Station Personnel Flight	2	42
No.2 Moreton Corbet	No.6 Station Personnel Flight	2	42
No.3 Acton Lea	No.7 Station Personnel Flight	3	42
No.4 North American	No.8 Station Personnel Flight	2	42
Bolas Waste	'D' SP Static Reserve Squadron	Reserve	100
Dawson's Rough	No.1 Platoon, 'K' Company, Home Guard	1	60
Matthew's Coppice	No.2 Platoon, 'K' Company, Home Guard	1	60
Acton Lea	No.3 Platoon, 'K' Company, Home Guard	1	60

9.2.2.B – AA Defence:

- AA Defence comprises eight Defence Posts of twin LMG manned by RAF Regiment AA Flight (37 other ranks)
- Regular personnel will be reinforced by AA Reserve composed of No.4 Flight Station Personnel (41 other ranks)
- All light machine-guns, (LMG) will have alternative positions and will be sited for their secondary role of ground defence
- A proportion of AA Posts are sited to bring fire on the runways.

9.2.3 Mobile Defence

9.2.3.A – Troops

a) The troops allotted to the Mobile Reserve are Station Personnel consisting of:

- No.1 Mobile Flight
- No.2 Mobile Station Flight
- No.3 Mortar Flight
- Gangster Flight.

9.2.3.B – Role

a) The tasks of the Mobile Reserve are:

- To seek out and destroy any enemy in the vicinity of the station
- Counter-attack and retake any area within the perimeter which may have been lost
- Provide reconnaissance and fighting patrols outside the perimeter
- To act in co-operation with any supporting mobile force.

9.2.3.C – Location

a) On the order of 'Action Stations' the Mobile Reserve will move to the locations outlined below. Commanders will report to the Battle HQ when in position

Table 8 – Locations of Mobile Reserve		
Unit	Strength	Location
RAF Regiment Rifle Flight	37	Acton Lea Farm
RAF Regiment Support Flight (Beaverette)	27	Lea Coppice (Nos.3 and 4 Bays)
Station Personnel No.1 Mobile Flight	41 combined	West edge of Acton Lea Coppice
Station Personnel No.2 Mobile Flight	41 combined	
Station Personnel No.3 Mortar (Mobile?) Flight	33	South edge of Acton Lea Coppice (Nos.1 and 2 bays)
Station Personnel Gangster Flight	24	Lea Coppice (Nos.5 bay)
Rifle Platoon, 'A' Company 31st Battalion South Staffordshire Regiment	40	Acton Lea Farm

9.2.4 Station Personnel Organisation

9.2.4.A – Establishment

a) 'A' SP Striking Squadron will consist of:

- No.1 Station Personnel Mobile Flight
- No.2 Station Personnel Mobile Flight
- No.3 Station Personnel Mortar Flight
- No.4 Station Personnel AA Flight.

b) No.1 Station Personnel Mobile Flight will consist of:

- No.1 Rifle Section: one SNCO and nine airmen
- No.2 Rifle Section: one SNCO and nine airmen

- No.3 Rifle Grenade Section: one SNCO and nine airmen (seven riflemen and three grenade riflemen)
 - No.4 MG Section: two NCOs and eight airmen (all Vickers MGs, Nos.1, 2 and 3 will not be armed with rifles).
- c) No.2 Station Personnel Mobile Flight:
- As for No.1 Mobile Flight, but sections to be numbered 5 to 8.
 - Four motor buses will be made available to transport Nos.1 and 2 Flights.
- d) No.3 Station Personnel Mortar Flight:
- Will consist of Sections 9 to 11 inclusive, each of which will be formed of one NCO, two drivers, eight gunners and two Smith gunners
 - Other than Nos.1, 2 and 3 Sections, all ranks will be armed with rifles. Six 15cwt lorries will carry the teams and trail the Smith guns.
- e) No.4 Station Personnel AA Flight:
- Will consist of Sections 12 to 15 inclusive, each of which will be armed with rifles.
- f) 'B' Station Personnel Static Squadron:
- Will be formed of four static Flights (Nos.5 to 8), with sections numbered 1 to 16:
 - Each Flight will be based on two Rifle Sections and two Vickers MG Sections
 - Each Section will consist of one NCO and nine airmen, all armed with rifles.
- g) 'C' Station Personnel Relief Landing Ground (RLG) Squadron
- The role of this squadron will be to defend the RLGs at Bridleway Gate and Bratton
 - It will be formed of five flights (Nos.9 to 13), with sections numbered 1 to 15:
 - Each Flight will be based on two Rifle Sections and two Vickers MGs Sections
 - Each Section will consist of one NCO and nine airmen, all armed with rifles
 - Each MG Section will have one Vickers MG.
- h) 'D' Station Personnel Static Reserve Squadron:
- All station personnel supernumerary to the defence establishment outlined above will be organised into 'D' Station Personnel Static Reserve Squadron, less the following personnel:

MT drivers	Essential maintenance	Servicing and administrative
DRs	Runners	Orderlies
Signallers	PAD personnel	Police and Medical Orderlies
 - The strength of this squadron will be governed by the requirements of flying operational demands. Normally it will be 100
 - Organisation of the squadron will be framed on sections of one NCO and nine airmen. This unit's weapon will be the Sten gun of which there are 130 available
 - The role of this squadron will be to reinforce the Static Sectors.
- i) Gangster Flight:
- Will be formed of flying instructors who will be armed with Thompson Sub-MGs
 - It will be based on four sections, Nos.1 to 4, each of six all ranks
 - Transport will be improvised of four fast open cars.

j) Armament:

- Detail of armament of station personnel is given in Table 10 below
- Additional to the arms shown in the table, all station personnel will each be in possession of six, No.36 hand grenades and detonators.

9.2.4.B – Action Stations

- a) In an emergency the station siren will be the signal for action stations. On oscillating blasts of the siren, station personnel will proceed individually to their destinations, and fall-in as detailed in Part I and Part II, other than No.3 Flight which will parade at the MT Section. The rendezvous of Nos.5–8 Flights is at their respective sector magazines.
- b) 'C' and 'D' SP Squadrons, other than those employed on essential duties, will proceed to their air-raid shelters, from which they will be called to their defence role as required.
- c) All ranks will be in possession of basic weapons. Flight commanders will arrange to draw ammunition, machine-guns, rifle grenades and grenades as follows:
 - Station Armoury – 'A', 'C' and 'D' Squadrons and Gangster Flight Sector
 - Magazines – 'B' Squadron.

9.2.4.C – RAF personnel Absent from Station

- a) On alert all ranks will be prepared to remain in camp. In the event of a surprise attack, 'Attack Alarm', or 'Ground Attack' being sounded in hours of darkness, all ranks having authority to sleep away from the station will remain at their locations.
- b) On returning, the following morning to normal duty, such personnel will not approach individually to the station if the 'Ground Attack' alarm continues. They will rendezvous at Shawbury Church and await orders.
- c) In the same way, personnel quartered on the station, if absent by day or night when the 'Ground Attack' is sounded, will rally immediately at Shawbury Church.
- d) All troops concentrating at Shawbury Church will be marched into the station in parties not exceeding 20. At the main entrance they must be recognised by the Duty Officer before entry to the station is permitted.
- e) All other means of entry would jeopardise the defence and safety of the individual offender who would possibly be fired upon.
- f) If however, Shawbury village is the centre of enemy activity, Acton Lea Farm would be an alternative rallying point.
- g) The Senior Administrative Officer will arrange police pickets at these rallying points to control and marshal personnel entering the station.

9.2.5 Home Guard Co-operation

9.2.5.A – Home Guard Units under Operational Command of the Station Commander

- a) For Station Defence purposes certain allotted platoons of the Home Guard come under Station Commander for Operational Command. Arrangements have been made for 'K' Company, 3rd Salop Home Guard to co-operate in the defence of the aerodrome.

- b) On the issue of the code word '*Newton*' this company will maintain a night and day watch in the following areas:
- No.1 Area Dawson's Rough Observation Post (022432)
 - No.2 Area Matthew's Coppice Observation Post (001422)
 - No.3 Area Acton Lea Observation Post (003444)
- c) After mustering 'K' Company will carry out the following operational tasks as directed by the Station Commander:
- Defend the following localities, all of which are locations of dispersed aircraft. These defended localities will consist of slit trenches and will be held to the last man and last round:
 - Dawson's Rough
 - Matthew's Coppice
 - Acton Lea.
 - Patrol the following areas:
 - Moreton Corbet (017444)
 - New House (993429).
 - Install blocks on the following roads:
 - Road leading from the Shawbury – Shrewsbury Road to Matthew's Coppice (003415)
 - Road leading from the Shrewsbury – Whitchurch Road to Matthew's Coppice (998424).
 - Maintain the Observation Posts outlined above, establish then frequently test communication with Battle HQ
 - The HQs of the company and platoons are as follows:
 - Company HQ at 27 Maintenance Unit HQ – Tel. 351 Extension 6
 - Company Commander normal – Tel. Extension 72
 - No.1 Platoon HQ at Warden's Guardroom, Dawson's Rough – Tel. Extension 41
 - No.2 Platoon HQ at Warden's Guardroom, Matthew's Coppice – Tel. Extension 44
 - No.3 Platoon HQ at Warden's Guardroom, Acton Lea – Tel. Extension 47.

9.2.5.B – Home Guard Units not under the Operational Command of the Station Commander

- a) Arrangements have also been made for 'D' Company, 3rd Battalion Salop Home Guard to co-operate in the defence of the aerodrome.
- b) On the issue of the code word '*Newton*' this company will maintain a night and day watch at the following Observation Posts:
- Booley (033468)
 - Grinshill Hill (976448)
 - High Hatton Hall (065459).
- c) After mustering 'D' Company will carry out the following operational tasks:
- Block and deny to the enemy the village of Shawbury (017424)
 - Patrol the area between the Inner and Outer Circle boundaries:
 - Boundaries of the Inner Circle. Left bank of the River Roden from Little Wytheford (019407) – Paper Mill Bridge (013468) – Pinfold Corner, Besford (009463) – Preston

Brockhurst (997457) – Sherwood (988457) –Grinshill Hill (976448) – Yorton (956449)

- Boundaries of the Outer Circle: A line from Little Wytheford (019407) – High Hatton (068457) – Hopton Chapel (056469) –Hopley Coppice (049480) – Lee Brockhurst 009480 – Rockhall Road (999463) – Holbrook X (962463).

- d) Install road blocks at the following points:
 - Bridge over River Roden (019424)
 - On Shawbury–Little Wytheford Road at (017423).
- e) Maintain the above Observation Posts
- f) Establish and frequently test communications with Battle Headquarters, Shawbury. The HQ of the company and platoons are as follows:
 - Company HQ – Estate Office, Acton Reynald – Tel. Clive 237
 - No.1 Platoon HQ – Church Farm, Stanton – Tel. Shawbury 231
 - No.2 Platoon HQ – Corbet Hall, Preston Brockhurst – Tel. Clive 240
 - No.3 Platoon HQ – Vicars Hall, Grinshill – Tel. Clive 221
 - No.4 Platoon HQ – Dickens House, Shawbury – Tel. Shawbury 223
 - No.5 Platoon HQ – Keeper's Hut, Hazels – Tel. Shawbury 224
 - No.6 Platoon HQ – Reception Park, Acton Reynald (Reserve Platoon).

9.2.6 Assistance of Mobile Columns, Regular Army

- a) The detail of this is summarised in Shropshire Sub-Area Defence Scheme No.1, of 17 November 1941. A column consisting of a company of 20 Initial Training Company, and/or 236 Training Regiment Royal Artillery at Oswestry, may be made available. Calls for support will be made to HQ Shropshire Sub-Area, alternatively through:
 - Commander NR Sector Shropshire Sub-Area: the Auction Market, Hodnet, tel. Hodnet 91, concerning Shawbury and Bridleway Gate RLG.
 - Commander Wellington Sector Shropshire Sub-Area: the Drill Hall, Wellington, tel. Wellington 302, concerning Bratton RLG.
- b) Reconnaissance for counter attack will be arranged by the Column Commanders – the LDA being present. These reconnaissance units will not go beyond arrangements for making contact with the enemy. Knowledge of the ground is of first importance and the seizing of Grinshill Hill (986241) will form part of the preliminary plan.
- c) The alternative for the columns will be as follows:
 - No.1 Track junction at Grinshill (986451)
 - No.2 Bings (Cottage in Coppice) (001403).
- d) These rendezvous are connected with the Battle Headquarters by field telephone and contact with the Mobile Column will be maintained by R/T.

9.2.7 System of Command and Intercommunication

- a) The Station Commander is in operational command of all troops allotted to the ground defence of the station. The position of the Battle HQ is within, and protected by No.3 Sector. The officer commanding the sector will be responsible for the security of the HQ.

Table 9 – Station Defence – Command Post Staff Duties		
Officer or Other Rank	Location	Duty
Station Commander	Battle HQ	Commander
LDA		Chief Staff Officer
Station Adjutant		Intelligence Officer
WAAF		Stenographer
2 Signallers (WAAF)		Telephone Operators
2 Signallers (No.5 Squadron)		R/T Communications
2 Orderlies (WAAF)		Office Orderlies
1 Sergeant (Maintenance Wing)	Report Centre	NCO i/c Report Centre
5 DRs (Maintenance Wing)		MCDRs ?
4 Cycle Orderlies (WAAF)		One for each Static Centre
3 Cycle Orderlies		One for each platoon of 'K' Company
Chief Flying Instructor	Station HQ	2nd in command
Assistant Adjutant		Staff Officer
Officer in command Cyphers		Cyphers
Relief Pool		Signallers
Relief Pool		Orderlies
2 Sergeant Instructors	Observation Post	Observer and Relief
3 Cycle Orderlies (WAAF)		Orderlies

- b) Intercommunication personnel will be relieved under departmental arrangements as dictated by the type of operations.

9.2.8 System of Alarm and Action on Issue of Code Words

- a) General warnings may be given publicly or from information received through the station communication system.
- b) Public warnings:
- Air-Raid Purple – No general action
 - Air-Raid Red – No general action.
- c) Air Ministry and Army Code Warnings

Air Ministry	GHQ Home Forces	Army	Meaning
Alert No.3			Invasion threat exists
Alert No.2	Stand To	ARRAS	Invasion probable in next three days
Alert No.1	Action Stations	NEWTON	Attack imminent

d) Battle Stations Full Manning

This will be given normally by verbal or written orders, but RAF Regiment, the Army detachment and Station Personnel (less 'C' and 'D' Squadrons) will take up Action Stations (Parts I and II) on the sounding of the station siren which later may prove the first notice in emergency.

e) Signals:

- Attack Alarm – Station siren
- Gas Alarm – Rattles
- Fire Alarm – Tannoy
- Gas Clear – Hand Bells.

Table 10 – Weapon Distribution							
Unit	Basic Weapons		Additional Weapons				Storage of additional weapons
	Type	Numbers	MG	Rifle grenade	Hand grenades	Smith gun	
No.1 Flight	.300 rifles	32	2	3	246	0	Station Armoury
No.2 Flight	.300 rifles	32	2	3	246	0	Station Armoury
No.3 Flight	.300 rifles	15	0	0	198	6	Station Armoury (Smith guns at MT)
No.4 Flight	.303	41	0	0	246	0	Station Armoury
No.5 Flight	.300	41	3	0	246	0	No.1 Sector Magazine
No.6 Flight	.300	41	4	0	246	0	No.2 Sector Magazine
No.7 Flight	.300	41	5	0	246	0	No.3 Sector Magazine
No.8 Flight	.300	41	3	0	246	0	No.4 Sector Magazine
'C' RLG Squadron	.300	150	5	0	900	0	Station Armoury
'D' Reserve Squadron	Sten sub MG	130	0	0	780	0	Station Armoury
Gangster Flight	Thompson sub MG	24	0	0	144	0	Station Armoury
Scale of ammunition to be held at Action Stations by all troops: 50 rounds per rifle 50 rounds per Sten SMG 1000 rounds per LMG 20 rounds per Rifle grenade 1200 rounds per Vickers MG 100 rounds armour piercing per Static Locality 50 rounds per Thompson MG 6 Hand grenades per man							
Scale of Reserve Ammunition to be held at each Flight HQ: 100 rounds per rifle 100 rounds per Sten SMG 500 rounds per Vickers MG 50 rounds per rifle grenade 500 rounds per LMG 200 rounds armour piercing per Static Sector 100 rounds per Thompson SMG 500 grenades per Static Sector							
'B' Sector Squadron ammunition will be stored in the Sector Magazines, and for all other units ammunition is stored in the Station Armoury							

9.2.9 Medical

9.2.9.A – Station Sick Quarters

- a) The Station Sick Quarters (SSQ) Decontamination Annexe is the main collecting centre for all wounded, including contaminated wounded. In the event of the SSQ being unusable through damage, the gymnasium becomes the SSQ – a reserve of medical equipment and stretchers is held there. In the event of the station becoming extensively damaged, the casual wards on the main Shawbury–Shrewsbury will become the main collecting centre, until clearance can be effected to hospitals at:

- | | |
|--|-----------------------|
| • RAF Hospital Cosford | Tel. Albrighton 150 |
| • RAF Bridgnorth | Tel. Bridgnorth 2342 |
| • Royal Salop Infirmary, Shrewsbury | Tel. Shrewsbury 2056 |
| • Military Hospital Shrewsbury | Tel. Shrewsbury 3017 |
| • Berrington Base Hospital, Shrewsbury | Tel. Crosshouses 242. |

9.2.9.B – Casual Wards

- a) A total of 61 beds are equipped for use in the Emergency Medical Service (EMS) scheme, which includes this station. If beds are required here, contact is made with the MOH, Dr W Taylor, Tel. Shrewsbury 3031. A small nucleus of dressings is held here for use by the Medical Officer, his orderly, or the civilian medical practitioner, according to circumstances. If the roads are damaged or blocked, a path via Matthews Coppice may be used to reach the casual wards.

9.2.9.C – Stretcher Bearers

- a) On 'Action Stations' being ordered, stretcher bearers will report to the Station Sick Quarters Decontamination Annexe. First Aid Posts are situated at:
- Main Guardroom
 - Gymnasium
 - No.27 MU Guardroom
 - Watch Office.
- b) Further First Aid Posts are found around the perimeter track at:
- Flight Hut near Warrant House
 - Acton Lea Warden's Post
 - Ferry Pilot's Hut.
- c) These are supplied with stretchers and first-aid equipment and, with the exception of the Flight Hut, they are connected to the telephone circuit. Casualties should be taken to the nearest First Aid Post, from where the SSQ should be notified either by telephone or runner.
- d) Should Shawbury village or any other neighbouring area be the sole point of attack, the Medical Officer and orderlies will be despatched, if possible, to give assistance.
- e) If the RAF station is attacked and a call is made for assistance, the Duty Medical Officer, orderly and ambulance will proceed at once to the scene. The off-duty Medical Officer will be informed at once, and the civilian medical practitioner will be asked to stand by.

9.2.9.D – Gas Casualties

- a) Two Decontamination Centres and twenty-six Gas Cleansing Points (GCPs), for personal cleansing by individuals, are provided for unwounded contaminated personnel. The importance of using the GCPs is that it saves on congestion and delay at the Decontamination Centres.

9.2.10 Messing

- a) Field Kitchens – at ‘Action Stations’ all defence personnel will be served from five kitchens as follows:

Kitchen	Location	Use by
No.1	Shawbury	No.1 Sector Static Troops
No.2	Bolas Waston	No.2 Sector Static Troops and 'D' Reserve, Station Personnel Squadron
No.3	Acton Lea	No.3 Sector Static Troops, Battle HQ, Report Centre, Platoons of the South Staffs Regiment RAF Regiment Rifle Flight
No.4	Carradine	No.4 Sector Static Troops
No.5	Acton Lea Coppice	Nos.1, 2, 3 Station Personnel Flights, Beaverette Flight and Gangster Flight.

- b) The AA Flight RAF Regiment and No.4 Station Personnel AA Flight will be accommodated from the field kitchens nearest to their AA Posts.
- c) Reserve Station – Two days reserve rations for troops will be distributed equally in four dumps and will not be touched without authority of the station commander.
- d) Home Guard – 'K' Company, 3rd Salop Home Guard will make its own arrangements in regard to messing, which must comply with its tactical role within the defence scheme.
- e) The main water supply is piped to all sectors. All defended posts are within close proximity to a tap.

9.2.11 Standing Orders for Security**9.2.11.A – Ground Action in Alert Phases (Inner and Outer Security)**

- a) Normal Times Prior to and on an Alert No.3 – Inner Security:
- In Nos.2 and 3 Static Sectors there will be a constant guard of one NCO and six other ranks, of an Army detachment, each of which will furnish by night only double ‘problers’. These problers will operate over the whole aerodrome (less the landing ground), within the inner perimeter, but including the three public roads on which the perimeter is framed. The boundary of the two patrols will be a line drawn north-south from 'K' pillbox to Carradine House.
 - These guards will stand to from half an hour before, to half an hour after dusk and dawn.
- b) Normal Times Prior to and on an Alert No.3 – Outer Security
- To safeguard dispersed aircraft, three Cycle Patrols, of one NCO and three other ranks, will operate in the following areas at night:

- **No.1 Outer Patrol** – will be furnished by OC Maintenance Wing, and will patrol Site Nos.7 and 9 and the field between Dawson's Rough and Crifton Coppice. This area is bounded by the Shawbury–Hodnet, and Shawbury–Bridleway Gate Roads.
 - **No.2 Outer Patrol** – will be furnished by CO RAF Regiment, and will patrol Sites Nos.5, 6 and 10 plus 'B' Field and Robins Hangars Nos.4 to 10 inclusive. This area is bounded by the Shawbury–Bridleway Gate, and Shawbury–Carradine–Grinshill Roads.
 - **No.3 Outer Patrol** – will be furnished by OC 27 Maintenance Unit, and will patrol Site Nos.3, 4 and 8, plus 'D' Field and Robins Hangars Nos.11 to 19 inclusive. This area is bounded by Shawbury–Carradine–Grinshill, and Shawbury–Wythefords Roads.
- c) Confinement to Station:
- A minimum of 66% of defence personnel will be confined to the station.
- d) On Alert 2 – Inner Security:
- In each Static Sector there will be a guard of 2 NCOs and 12 airmen, each furnishing by night two pairs of Prowlers. These will operate over the whole of the sector within the Inner Perimeter, including the three public roads on which the perimeter is framed. These guards will 'Stand To' at Action Stations from one hour before, to one hour after dusk and dawn.
 - Nos.1 and 4 Sector guards will be furnished by Station Personnel, while those of Nos.2 and 3 Sectors will be manned by an Army Detachment.
- e) On Alert 2 – Outer Security:
- As above, but these patrols will be increased to one NCO and six other ranks.
- f) Confinement to Station:
- A minimum of 90% of Defence personnel will be confined to the station.
- g) On Alert 1 – Inner Security:
- As above, but these patrols will operate both by day and night
 - All Army and RAF Regiment Detachments will 'Stand To' from one hour before, to half an hour after dawn.
- h) On Alert 1 – Outer Security:
- As above but these patrols will operate both by day and night.
- i) Confinement to Stations
- 100% Defence Personnel will be confined to the station.

9.2.11.B – Anti-Aircraft Action in Alert Phases

- a) AA Action Normal Times – prior to, and on Alert 3:
- A minimum of three AA Posts will be manned from half an hour before dawn, to half an hour after dusk
 - One AFV will be manned by a crew of three, and sited at the Watch Office from half an hour before dusk, to half an hour after dawn. At dusk one AFV will make a circuit of the inner perimeter to ensure that all places of entry are closed
 - A Duty Defence Officer will be constantly on duty.
- b) AA Action on Alert 2:
- All AA Posts will be manned from one hour before dawn, to one hour after dusk.

- c) AA Action on Alert 1:
- All AA Posts will be manned constantly by day and night, and all AA Flight Personnel will 'Stand To' from one hour before, and one hour after dawn and dusk.
- d) Confinement to Station:
- In all phases of Alert, the AA Flight will be confined to the station as ordered for Ground Defence Personnel.
- e) Normal Security – additional to the above:
- HQ Guard of one NCO and six airmen will be responsible for the Main Gate and the Signal Exchange
 - RAF Service Police will furnish an Inner Double Patrol of hangars and buildings during hours of darkness, and Air Ministry Wardens will be responsible for 27 MU hangars and buildings.

Table 11 – Available Defence Personnel			
Unit	Officers	Other Ranks	Location
STATIC			
'B' Station Personnel Squadron HQ	1	0	
No.5 Station Personnel Flight	1	41	No.1 Static Area
No.6 Station Personnel Flight	1	41	No.2 Static Area
No.7 Station Personnel Flight	1	41	No.3 Static Area
No.8 Station Personnel Flight	1	41	No.4 Static Area
'D' Station Personnel Squadron	1	100	Bolas Waste
AA Flight RAF Regiment	1	37	AA Posts
No.4 Station Personnel Flight	0	41	AA Posts
'K' Company, 3rd Salop Home Guard, HQ	2	5	
No.1 Platoon, 3rd Salop Home Guard, HQ	2	58	Dawson's Rough
No.2 Platoon, 3rd Salop Home Guard, HQ	2	58	Matthew's Coppice
No.3 Platoon, 3rd Salop Home Guard, HQ	2	58	Acton Lea
Total Static Personnel	15	521	
MOBILE			
Beaverette Flight, RAF Regiment	1	27	South Acton Lea Coppice
Rifle Flight, RAF Regiment	1	37	
'AQ' Station Personnel Squadron			
No.1 Station Personnel Flight,	1	41	West Acton Lea Coppice
No.2 Station Personnel Flight	1	41	West Acton Lea Coppice
No.3 Station Personnel Flight	1	33	South Acton Lea Coppice
Gangster Flight	1	24	South Acton Lea Coppice
Platoon South Staffs Regiment	1	40	Acton Lea Farm
Total Mobile Personnel	7	243	
OUTER DEFENCES			
'D' Company 3rd Battalion, Salop Home Guard	10	187	
RELIEF LANDING GROUND FORCE			
'C' Station Personnel Squadron	2	150	Bridleway Gate and Bratton
Grand Total	34	1101	

Table 12 – Distribution of 'B' Station Personnel Static Squadron	
No.1 Static Sector HQ (No.5 Station Personnel Static Flight). No.1 Guard Hut	1 officer and 4 airmen armed with four rifles
'B' Flight Telephone Exchange and Football Field	1 pillbox manned by 4 airmen armed with one Vickers MG and two rifles
	4 two-man slit trenches armed with two rifles
	2 three-man slit trenches, armed with three rifles
'E' Flight Defence Post at Dawson's Rough	1 pillbox, manned by 4 airmen armed with two Vickers MG and two rifles
No.2 Static Sector HQ Moreton Corbet (No.6 Station Personnel Static Flight). Air-Raid Shelter near cottage	1 officer and 4 other ranks armed with four rifles
'T' Flight Coppice Field	1 pillbox armed with two Vickers MG and two rifles
	2 eight-man brestwork walls armed with eight rifles
	3 two-man slit trenches armed with two rifles
'J' Flight School	1 four-man brestwork armed with four rifles
	1 three-man slit trench armed with three rifles
	1 loop-holed building, manned by 4 airmen armed with four rifles
No.3 Static Sector (Acton Lea) (No.7 Station Personnel Static Flight). Warden's Hut	1 officer and 3 airmen armed with three rifles
'M' Flight Hedge BHQ	1 pillbox, manned by 4 airmen armed with one Vickers MG and two rifles
	1 brestwork manned by 5 airmen, armed with five rifles
	3 two-man slit trenches armed with two rifles
'N' Flight Dispersal wall	2 pillboxes, each manned by 4 airmen armed with one Vickers MG and two rifles
	1 three-man brestwork armed with three rifles
	1 two-man brestwork armed with two rifles
'O' Flight Rootes	1 pillbox, manned by 4 airmen armed with two Vickers MG and two rifles
	1 six-man brestwork armed with six rifles
No.4 Static Sector (North American) (No.8 Station Personnel Static Flight). Seagull Trench	1 officer and 3 airmen armed with three rifles
'P' Flight North American Dispersal	1 six-man brestwork armed with five rifles
	4 two-man slit trenches, each armed with two rifles
	1 loop-holed building manned by 4 airmen armed with four rifles
'Q' Flight Cottage Field Seagull Trench	1 seagull trench, manned by 6 airmen armed with two Vickers MG and four rifles
	2 three-man slit trenches armed with three rifles
	2 two-man slit trenches armed each armed with two rifles
	1 loop-holed building manned by 4 airmen armed with four rifles

9.3 – Defence of London District ADGB Aerodromes

The source of this section is WO 199/22

9.3.1 Recommendations

- a) The Chiefs of Staff Committee at their 205th Meeting on 9 June 1941 discussed a report on the Sub-Committee for the Defence of Aerodromes. The report recommended that a troop of light tanks should be made available to each of 29 fighter aerodromes within two months.

- b) An armoured formation was being re-equipped with Cruiser tanks; this would release 87 light tanks which would be allocated to the following aerodromes in order of priority:

1 Wittering	11 Biggin Hill	21 Croydon
2 Collyweston	12 Hornchurch	22 West Malling
3 Kingscliffe	13 North Weald	23 Hunsdon
4 Snailwell	14 Debden	24 Stapleford Tawney
5 Great Sampford	15 Duxford	25 Castle Camps
6 Fairlop	16 Northolt	26 Fowlmere
7 Heathrow	17 Ford	27 Middle Wallop
8 Gravesend	18 Merston	28 Ibsley(c)
9 Tangmere	19 Westhampnett	29 Coltishall
10 Kenley	20 Redhill	

- c) Personnel to man these tanks were to be provided by Royal Armoured Corps from 1, 6, 8 and 9 Armoured Divisions, and 21 and 25 Army Tank Brigades. They would be under the command of the appropriate local defence commander.
- d) Following the result of a report issued on 10 June, about the German attack on Crete, the GOC-in-C, Home Forces made an inspection during the middle of June 1941, of the RAF aerodromes in London district, and came up with a number of key recommendations. They were:
- Heavy AA guns should properly protect Northolt. At that time the nearest HAA gun sites could only protect it at some distance
 - Heston had neither Bofors guns or Hispano, and it ought to be given both
 - Lewis gun positions should be dug in below ground level, and not left in sandbag revetments as most of them currently were. They were sited too close to the Bofors guns
 - Only 48 rounds of AP shell were allocated to each Bofors gun
 - ADGB Lewis guns received an allotment of one tracer to every three, which was considered too high. Ring sights, and Motley or Scarff mountings ought to be provided for light automatics that are sited for AA fire, and which could not be given tracer
 - More ammunition for anti-tank rifles was necessary, as the present scale of 50 rounds per rifle was considered to be dangerously inadequate, and issue of No.68 anti-tank grenades, SIP grenades, and anti-tank percussion grenades should be held as station stores.
- e) It was felt that 18in-walled pillboxes should better protected against SAA, including AP from dive bombers. It was recommended that the area below loop holes should be thickened with earth and rubble.
- f) More camouflage netting with scrimming, and more green wire wall was required.

- g) American .300 weapons with an average of only 1,000 rounds each, and unable to fire tracer and AP, were considered unsatisfactory, hence it was recommended that .303 weapons from less important airfields, or elsewhere, should be given to fighter aerodromes. It was further recommended that all American Lewis guns should be removed from the aerodromes, and substituted with British .303 Lewis guns.

9.3.2 The Result

- a) As a result of these recommendations sufficient .303 rifles were found from the Officer Training Cadet organisation, and these were issued on the following scale:

Kenley (200)	Croydon (50)	Heston (50)
Northolt (125)	Hendon (250)	PT School Hendon (100).

- b) The Machine-gun Training Centre, Mill Hill lent .303 Vickers MG to certain aerodromes:

Kenley (6)	Croydon (nil)	Heston (4)
Northolt (14)	Hendon (2)	

- c) Anti-tank grenades and .303 ammunition was supplied from Assistant Director Ordnance Services (ADOS), London District at the following quantities:

	<i>SIP Grenades</i>	<i>.303 Ammunition</i>
Kenley	1,500	225,000
Croydon	1,000	175,000
Northolt	1,500	225,000
Hendon	1,000	175,000
Heston	1,000	175,000

- d) Three more Beaverettes were allotted to each aerodrome; these were to be manned and maintained by the RAF.
- e) Barbed wire entanglements erected by the local garrisons would consist of:
- At least two double apron fences with a triple Dannert fence in between, or
 - At least four rows of the new Hofors type barbed wire obstacle.
- f) Reliance on pillboxes alone would cease, in favour of a combination of pillboxes and entrenched section posts and weapon pits as alternative accommodation for the garrison of the pillbox.
- g) AA guns were given a secondary role as defences against tanks, which applied to Bofors, Hispano, and HAA guns.
- h) There were two main methods used by AA Defence by light automatics:
- 'Hosepipe' method (not using sights) – requires tracer
 - From the shoulder using sights.
- i) The former now required not less than three rounds of tracer in every twenty-five rounds (previously one tracer to every three), but no actual mounting for the gun. The latter required 100 and 200 mph sight rings. Scarff or Motley mountings had the advantage over a pillar mounting in that the gun goes around the man instead of vice-versa. Bren guns were best fired from the hip but required tracer.

- j) Two-man light automatic gun positions were to be sited in key-hole-shaped gun pits to a depth of 4ft or 4ft 6in. These would have a diameter of 2ft 6in for the gunner, and a slit-trench (up to 5ft 6in deep, 3ft 6in long and 2ft wide) for the number two gunner. The two elements gave a key-hole shape in plan view. No parapet was to be provided. Pits with Motley mountings were generally 3ft 6in deep, while those having Scarff rings were 5ft 6in deep.
- k) RAF Benson had a very good layout and was seen as the model station.
- l) Army battalions were to be permanently located within one or two miles of each aerodrome in addition to existing mobile columns:
 - Northolt – 1st Royal Norfolk
 - Hendon – 2nd Welsh Guards, plus a detachment of 300 holding battalion, Coldstream Guards at Cockfosters
 - Heston – 2nd Irish Guards, plus a detachment of 250 holding battalion, Welsh Guards at Harlington, which is also responsible for Hanworth and Heathrow
 - Croydon – 2nd Royal Warwicks, plus a detachment of 200 of holding battalion, Grenadier Guards at Purley, who are responsible for Croydon and Kenley
 - Kenley – 1st Scots Guards.
- m) The pre-June 1941 Home Defence rules in London District were as follows:
 - At night pillboxes were to be manned by a sufficient garrison to man its automatic weapons, and the perimeter of the defences would be patrolled
 - The garrisons of posts and gun-sites would stand to, for the hour before, and half an hour after sunrise, while the remainder of the garrison were at 15 minutes notice. This applied to a period before 'Action Stations'. After that code word was issued, the whole garrison would stand to
 - On receipt of 'Stand To', military guards and RAF station defence force personnel were confined to barracks
 - On receipt of 'Action Stations', military guards and RAF station defence force personnel would man the defences and continue to do so until the warning was cancelled.
- n) After June 1941, the rules outlined above were cancelled and substituted with the following:
 - Before issue of code word 'Stand To':
 - All AA light automatic posts were to be manned continuously from 1.5 hours before sunrise, until one hour after sunset
 - By night all automatic weapons sited for ground defence were to be manned
 - The perimeter of the aerodrome would be patrolled by night
 - The garrisons of all pillboxes and defended localities, and the gun teams of automatic weapons, would stand to, from 1.5 hours before sunrise, until half an hour after sunrise. The rest of the garrison were at 15 minutes notice
 - From issue of the code word 'Stand To':
 - The whole garrison would be confined to barracks
 - All defences would be manned day and night
 - The whole garrison would stand to, from 1.5 hours before sunrise, to half an hour after sunrise, and all armoured fighting vehicles would be fully manned.

- o) A GHQ letter (HQ1181/Ops) dated 5 June 1941, forecast a relocation of AA tasks to AA guns on invasion or its immediate threat, broadly on the lines of taking guns from factories and putting them onto purely military tasks. Bofors guns which could be made available were as follows:

Fairey Aviation at Hayes (4)

Hawker factory at Kingston (2)

Hawker factory at Langley (5)

Magnesium Products at Slough (4).

- p) Troops and battalions allocated for the defence of aerodromes were authorised to operate against airborne troops within a radius of a mile and a half from the aerodrome, or up to three miles under certain circumstances. This distance was to be exceptional because of the danger that battalions could be prevented from carrying out their primary task.

Table 13 – London District Aerodromes Weapon Statement					
June 1941					
Weapon/Ammunition	Croydon	Kenley	Heston	Hendon	Northolt
Bofors	2	4	0	2	4
Hispano	4	4	0	0	4
A/T Rifles	4	5	4	3	6
Bren	0	13	0	0	6
Vickers	10	21	14	18	6
.303 Lewis	24	35	35	23	17
.300 Lewis	8	22	8	12	23
Thompson	3	5	3	3	5
Ammunition					
Mills bomb No.36	380	900	300	300	400
Self-igniting Phosphorous bombs	700	200	245	200	200
No.73 Grenade	50	100	50	50	50
.55 A/T Rifle	600	600	200	300	200
.300 (thousands)	3.7	35	21	18	44
.303 ordinary (thousands)	109	159	160	76	234
.303 AP (thousands)	4.4	5.3	1	1	2
.303 Tracer (thousands)	3	0	0	?	0.3
.45 Thompson (thousands)	0.59	3.75	?	?	3.75
Armoured Fighting Vehicles					
Beaverettes	2	1	3	2	3
Pickett Hamilton Fort	0	0	3	0	3
Allan Williams Turret	?	?	?	?	?
Blacker Bombards	12	12	12	12	12
75 Alan Williams turrets had been allotted to London District and distributed as follows:					
South-West Sub-Area	29				
South-East Sub-Area	16				
North-West Sub-Area	13				
North-East Sub-Area	17				

London District Aerodromes Weapon Statement – (contd)
Special Points
<p>Croydon</p> <p>.303 ammunition to be increased from 109,000 to 175,000 rounds.</p> <p>Only 3,776 rounds of .300 ammunition for 12 guns, or 300 rounds per gun.</p> <p>The good water table made this an ideal aerodrome for sunken weapon pits provided with Motley or Scarff mountings.</p> <p>No signallers or signalling equipment available.</p>
<p>Kenley</p> <p>The six .303 Vickers only have three belts per gun. No tracer available.</p> <p>The belts held for nine .300 Vickers were unsuitable. There were no belts for six other .300 Vickers and there were no spares available.</p> <p>There was a shortage of spares for all thirty-two .300 Lewis and for all thirty-five .303 Lewis.</p> <p>The three Bedford AFVs had been withdrawn for repairs.</p> <p>One Hispano being repaired, three were sited on the perimeter and one was sited away from the aerodrome.</p> <p>Of the four Bofors, only one actually covered the aerodrome, another partially covered the aerodrome, and two were located on towers across the valley, making them vulnerable.</p> <p>.303 ammunition would be increased from 159,000 to 225 000.</p> <p>Bad camouflage.</p>
<p>Northolt</p> <p>Only two belts available for the .300 Vickers.</p> <p>Three yokes required for .300 Lewis.</p> <p>Only 300 tracer and 2,000 AP rounds available.</p> <p>Only one Bofors covers the aerodrome (which is too far away sited on the cricket pitch). The Bofors to the west was blocked by the aircraft dispersal bays and the other two are too far away to be effective.</p> <p>The above ground weapon pits were generally well sited, but were very conspicuous.</p>
<p>Heston</p> <p>Only 1,000 AP and no tracer, it was however the only aerodrome with incendiary bullets (300).</p> <p>Some of the weapon pits were badly camouflaged and too vulnerable.</p> <p>.303 ammunition to be increased to 175,000 rounds</p>
<p>Hendon</p> <p>Two Bofors were sited on the perimeter.</p> <p>Only 1,000 AP .303 ammunition and no tracer.</p> <p>Some weapon pits were not well sited, and were badly camouflaged. Several guns are on top of buildings.</p> <p>Battle HQ is very vulnerable being perched on top of the SHQ building.</p> <p>Hosepipe method not understood.</p> <p>Very poor water table, making sunken weapon pits impossible.</p> <p>.303 ammunition to be increased up to 175,000 rounds.</p>

Table 14 – London District Aerodromes Allocation of Troops			
Troops at Aerodrome	LMGs, AFVs	Reinforcements	Notes
Vulnerable Point 83 – Heston			
10th (HD) Battalion Middlesex Regiment (4 officers and 120 ORs)	6 Lewis 2 'K', 1 Bren 2 Brownings	Mobile Column, Holding Battalion, Grenadier Guards at Harlington	Located in prepared posts and pillboxes (12) defending LG and aircraft works
Detachment Holding Battalion, Coldstream Guards (1 officer and 25 ORs)	2 Vickers guns	1st Welsh Guards at Putney (General Police Reserve)	
35 Searchlight Section (9 ORs)	1 Searchlight 1 Lewis gun	715 Construction Company, RE (1 officer and 60 ORs)	
35 Searchlight (AFVs) (19 ORs)	3 AFVs each with 3 LMGs	WT School Lydd	Converted Bedford lorries belonging to 340/35 SL, RA
Home Guard (50 ORs)	2 Vickers guns 2 Beaverette		
Vulnerable Point 93 – Hanworth			
10th (HD) Battalion Middlesex Regiment (2 officers and 57 ORs)	3 LMG (10th Middlesex) 3 LMG (128 LAA Battery, RA), 1 S/L and 1 LMG (RE)	Mobile Column, Holding Battalion, Grenadier Guards at Harlington	On 'island' in middle of aerodrome. Four pillboxes. General Aircraft works have their own Home Guard unit
		1st Welsh Guards (General Police Reserve)	
	3 LMG NE Side of 128 LAA, 3 LMG NW side and 3 LMG SW side	No.1 MT Depot, RASC adjoining aerodrome	200-600 yards outside the aerodrome
Vulnerable Point 101 – Croydon			
'E' Company, 12th (HD) Battalion, Queen's Royal Regiment (2 officers and 236 ORs)	2 Anti-tank rifles	1st Scot's Guards, at Norwood (General Support of Police)	10 pillboxes
2/8th Middlesex Regiment (2 officers and 47 ORs)	4 Vickers LMG	Detachment Holding Battalion Grenadier Guards at Selsden (175 ORs and 2 AFVs)	
327 Company, RE, 31 AA Battalion	6 Lewis guns 2 armoured trucks		
706 General Construction Company, RE (1 officer and 55 ORs)			
148 LAA Battery, 43rd Regiment, RA (2 officers and 22 ORs)	2 Quadruple mountings LMGs		
'C' Troop, 163rd Battery, RA (1 officer and 30 ORs)	2 Bofors guns		

London District Aerodromes Allocation of Troops – (contd)			
Troops at Aerodrome	LMGs, AFVs	Reinforcements	Notes
Vulnerable Point 103 – Kenley			
Scots Guards (5 officers and 260 ORs)	1 armoured lorry (manned by 467 Bty, RA) and 5 Bren guns		15 pillboxes, of which 2 had been damaged
2/8th Middlesex Regiment (2 officers and 46 ORs)	4 LMG to fire on enemy aircraft flying to the aerodrome	1st Scots Guards, General Police Reserve	3 cast pipe portable boxes used for AA defence
148th Battery, RA (1 officer and 66 ORs)	2 guns, 8 LMGs (air defence) 5 LMGs (air and ground)	Canadian MG Company (Saskatoon and Toronto)	
152nd Battery, RA (2 officers and 53 ORs)	4 Bofors, 4 LMGs		
Vulnerable Point 95 – Heathrow			
10th (HD) Battalion, Middlesex Regiment (4 officers and 100 ORs)	7 Lewis guns 1 'K' 2 Browning	Instructors from ITC Hounslow with 4 Bren guns. Mobile Column Holding Battalion Grenadier Guards at Harlington	Maintaining 11 pillboxes by day and night - garrison of 6 men in each and sleeping in tents
Fairey Aviation Company Home Guard (14 ORs)	2 Beaverettes each with Bren, plus 1 Hispano on Beaverette		
Vulnerable Point 49 – Hendon			
7th (HD) Battalion, KRRC (2 officers and 77 ORs)	4 Vickers 3 AFVs		
2/8th Middlesex Regiment (1 Platoon)			
RE (1 officer and 60 ORs)			
AMPC (1 officer and 52 ORs)			
Searchlights (7 ORs)			
REs for AFVs (1,018 ORs)			
Vulnerable Point 63 – Northolt			
Training Battalion, Coldstream Guards (3 officers and 107 ORs)	8 Vickers LMGs 5 Bren guns 3 AFVs		
10th (HD) Middlesex Regiment (1 officer and 31 ORs)			
RE (1 officer and 60 ORs)			

Table 15 – London District Defence of Aerodromes			
based on WO 199/3259			
Aerodrome	Defence Commander	Garrison	AFV
Northolt Class A	Lt-Colonel W C Shaw Stewart	70 Middlesex (9 officers and 260 ORs) 70 Middlesex (3 officers and 60 ORs) Training Battalion, Irish Guards RAC	3 Armadillos 4 Armoured cars 3 Beaverettes 3 Tanks
Heston Class B	Lt-Colonel F C Bishop	10 Middlesex (10 officers and 265 ORs) RAC RAC	3 Armoured cars 3 Tanks 3 Beaverettes
Kenley Class A	Lt-Colonel G P St G de Wilton	Holding Battalion Grenadier Guards (5 officers and 166 ORs) 70 Middlesex (6 officers and 190 ORs) 70 Middlesex (1 officer and 30 ORs) RAC	5 Armadillos 2 Beaverettes Vickers guns 3 Tanks
Croydon Class B	Major L Pyrke	11 Rifle Brigade (14 officers and 300 ORs) RAC	3 Armoured cars 2 Beaverettes 3 Tanks
Fairlop Class A	Major E W Baldwin	13 Royal Fusiliers (9 officers and 300 ORs) RAC	Lanchester AFV 3 Tanks
Hendon Class A	Major A Crabbe	70 London Irish Rifles (4 officers and 160 ORs) 70 Middlesex (5 officers and 174 ORs)	3 Armadillos 5 Beaverettes
Heathrow Class B	Major F Leathley	10 Middlesex (5 officers and 250 ORS)	2 Beaverettes
Hanworth Class B	Major W G Horton	10 Middlesex (4 officers and 70 ORs)	1 Beaverette
Aldenham Class UC		Home Guard	
Smith's Lawn Class UC	Officer Commanding, Grenadier Platoon	One platoon of Holding Battalion, Grenadier Guards. Home Guard	

Part 10 – The Development of the WWII Air Defence System

10.1 – Fighting Area Operations Room

10.1.1 1925–1928

- a) The original Fighting Area Operations Room (FAOR) was located in a wooden building immediately south of Hillingdon House, Uxbridge. The hut was converted to an operations room and signals office in 1925 under the terms of an Air Ministry letter 590011/25WB7, dated 6 March 1925 and was first used for this purpose in the early part of June 1925. The building consisted of a plotting table and a single dais providing a platform six feet by four, and three feet in height. Experience during the 1925 Air Exercises, led to a dais of increased size and the room continued in this form until 1929.

10.1.2 Mock-up Operations Room

- a) In 1929, it was thought that a new operations block would eventually be built somewhere in the grounds of Hillingdon House. The exact details were unknown as to size and layout of the new permanent building; it was therefore, decided to establish a new mock-up operations room in the existing Conference Block situated immediately in front of Hillingdon House (Drawings UX515 and UX516). The sum of £670 was requested for the structural alterations to the building and £400 was allocated for fitting it out with new equipment. The work was to be completed by 31 March 1929, ready for the 1929 training season. The new room featured a sunken floor for the plotting map, some two feet below the normal floor level.⁵¹ It was used until January 1936.
- b) RAF Fighter Command's operational control organisation was developed and tested using this mock-up between 1929 and 1936. It was used in conjunction with the various Sector Operation Rooms (SORs) located at the RAF stations in the London area – all of which had a part to play in the development of a working air defence organisation in the UK.

10.2 – The First Sectors

10.2.1 Layout

- a) Between 1925 and 1934, ADGB Air Fighting Zone was divided into ten sectors with sector stations as follows:
- | | |
|--------------------|-------------|
| • Sector 'A' | Duxford |
| • Sector 'B' | North Weald |
| • Sector 'C' | Hornchurch |
| • Sector 'D' | Biggin Hill |
| • Sector 'E' | Kenley |
| • Sector 'F' & 'G' | Northolt |
| • Sectors 'H' & I | Upavon |
| • Sector 'J' | Filton |

⁵¹ AIR 2/1224

- b) In addition to the above, the fighter stations at Hawkinge and Tangmere were equipped with operations rooms and were known as Advanced Fighter Stations, the units there being designated as Interceptor Squadrons.
- c) All of these stations had in common a standard type design operations room, the original drawing (1161/24) is dated 1924 with Kenley, North Weald, Hornchurch and Tangmere having buildings built between 1925 and 1927. The examples at Duxford and Northolt were built c.1928 (757/27). Biggin Hill, the last one to be built was completed in 1930 to drawing 404/29.
- d) An outer Artillery Zone, equipped with guns and searchlights about six miles in width, extended in front of Sectors 'B' to 'E'.

10.2.2 Reorientation Scheme

- a) After a change in the boundaries under the Reorientation Scheme in 1934/1935, the Air Fighting Zone was extended to 20 miles in width and realigned as follows:
 - From Portsmouth around the southern and eastern boundaries of London, and then north eastward to Huntingdon to cover the Midlands, and the northern approaches of London.
 - The Outer Artillery Zone was extended to cover the whole of the Air Fighting Zone. Sectors were rearranged as follows:⁵²
 - Sector 'A' Tangmere
 - Sector 'B' Kenley
 - Sector 'C' Biggin Hill
 - Sector 'D' Hornchurch
 - Sector 'E' North Weald
 - Sector 'F and G' Duxford
 - Sector 'H' Northolt
- b) In the following year the Outer Artillery Zone was abolished and the width of the Air Fighting Zone was extended to 25 miles, made practical by the improved range of R/T.

10.2.3 Air Exercises

- a) The Air Exercises, carried out every year for a two-day period in August, were conducted in order to test the air defence forces organised under the AOC No.11 (Fighter) Group, and to exercise the bomber groups in controlling and operating their squadrons through their operations rooms. The defence forces of the 1937 Exercise was conducted around the sectors as laid out within Reorientation Scheme, with Northolt being allocated a temporary one known as Sector 'H'.⁵³ The exercise involved the 11 Group airfields, with fighter squadrons having two flights each of six aircraft:
 - Biggin Hill (32, 79 Squadrons and 25 Squadron with one flight of six)
 - Duxford (19, 66 and 80 Squadrons)
 - Hornchurch (54, 75 and 64 Squadrons)

⁵² AIR 2/2993

⁵³ Boundary of Sector 'H' was Hitchin–Berkhamsted –Beaconsfield–Guildford–Teddington, and following the Inner Artillery Zone boundary to Waltham Cross and then Hitchin

- Kenley (3, 17 and 46 Squadrons)
 - Northolt (23 and 111 Squadrons)
 - North Weald (56, 64 and 151 Squadrons)
 - Tangmere (1 and 43 Squadrons).
- b) The following defending units were involved:
- Searchlights of the 1st Anti-Aircraft Division, Territorial Army, situated in Sector 'E' and 'D' (north of the Thames)
 - Nos. 4, 12, 15, 17 and 18 Observer Groups, who manned their posts from 18.00 hrs until dark (apart from part of 18 Group which operated until midnight).
- c) The attacking forces consisted of light and medium-bomber squadrons under the command of the AOC No.2 (Bomber) Group:
- 12, 83 and 142 Squadrons (Hinds) based at Andover
 - 35 and 207 Squadrons (Gordons) and 49 Squadron (Hinds) based at Worthy Down
 - 98 and 104 Squadrons (Hinds) based at Hucknall
 - 52 Squadron (Hinds) and 63 Squadron (Battles) based at Upwood
 - 114 Squadron (Blenheims) and 139 Squadron (Hinds)
 - 21 and 34 Squadrons (Hinds) based at Lympne
 - 605 Squadron (Hinds) based at Rochford
- d) These were supported by heavy bombers under the command of the AOC 3 (Bomber) Group:
- 99 Squadron with ten Heyfords based at Mildenhall
 - 9 Squadron with ten Heyfords based at Scampton
 - 38 Squadron with six Hendons based at Marham.
- e) Six Ansons of 217 General Reconnaissance Squadron at Bircham Newton also took part.
- f) The high-level bombing targets were:
- Tilbury Docks and Thames Haven in Sector 'D'
 - Colchester, in No.18 Observer Group area
 - Bentley Priory and Hillingdon House, in No.17 Observer Group area.
- g) Dive and low-level targets were:
- The airfields at Stradishall, Wattisham and Martlesham in 18 Observer Group Area
 - Halton Camp and Hillingdon House within 17 Observer Group area.

10.2.4 Sector Boundaries, post November 1938–1939

- a) Sector boundaries and letter-code designations were constantly being reviewed and changed, with new ones being added as soon as a weakness in the system had been identified. Other reasons for expansion or alteration included; the extension of the RDF chain, additional roles being placed on certain sectors such as protecting convoys, and the formation of 10 Group outlined in Expansion Scheme 'M'. Exactly when the sector boundaries were rearranged to include the whole of England is not known, but the majority were certainly in place around October 1938 when they were approved by the ADGB Sub-Committee. The western sectors

were linked to the eastern sectors 'O' (OW), 'M' (MW), 'L' (LW) and 'K' (KW), and these were then added to the scheme around November 1938.

- b) A major reorganisation also took place in October 1939.⁵⁴ Sector 'Z' HQ, Northolt was originally intended as a reserve sector for the London Air Defences, but its role soon changed to that of defending London from bombers that had penetrated the Northern Sector, and which had turned south-east. Its secondary role was to supplement Sectors 'A' to 'F'.

10.3 – Experiments, Air Exercises and Modifications

10.3.1 Automatic Transmission of Operational Orders

- a) In order to speed up the issuing of operational orders from FAHQ to the sector stations, tests were carried out during the 1928 training season at Northolt and Hillingdon House using automatic transmission equipment which utilised the existing telephone circuits. Display panels were installed in the pilot's room and the operations room, which were wired in parallel, which ensured simultaneous display in both locations, of the orders received from FAHQ.
- b) The equipment installed by the Post Office consisted of an automatic telephone dial, by means of which the OC Fighting Area was able to transmit any one of ten orders to Northolt, and to display these orders simultaneously in the operations room and the pilots' room. Certain of the 'warning' orders were arranged to automatically control the typhoon whistle at Northolt, and to cause it to sound distinctive blasts immediately on the receipt of the order from FAHQ. The time taken for these orders to be given at FAHQ and the SOR was just half a minute, and a further half a minute between the sector operations room and the pilots' room.
- c) The result of this successful trial, which lasted until after the 1930 training season, was that permanent installations were recommended for Sectors 'C', 'E' and 'F'. The cost of expanding the transmitting apparatus to service three stations was £127. To modify the existing equipment at Northolt and bring it up to two-squadron status was £68, and for the provision of a complete installation at both Kenley and Hornchurch was £120. At this time – 1930 – typhoon whistles had already been installed at all three stations, but nowhere else. The ultimate aim was to develop a transmitter that could send any one of eight orders, to any one of the seventeen squadrons, grouped as follows:

Biggin Hill	two squadrons	Kenley	two squadrons
Duxford	one squadron	Northolt	two squadrons
Filton	one squadron	North Weald	two squadrons
Hawkinge	one squadron	Tangmere	two squadrons
Hornchurch	two squadrons	Upavon	two squadrons.

- d) A buzzer sounded in both the operations room and the pilots' room, in order to draw attention to the impending arrival of an automatic order, and an acknowledgement lamp in the operations room was operated by the squadron commander. An acknowledgement was then transmitted back to FAHQ.⁵⁵

⁵⁴ AIR 16/35

⁵⁵ AIR 2/799

10.3.2 Typhoon Whistles

- a) The first typhoon whistles were installed at Northolt, Hornchurch and Kenley during 1930. They were hand-operated by a Morse key installed on the control dais besides the Sector Commander's keyboard. It was used to bring the squadrons on the station to 'Stand By'. The code used was as follows:
- Morse letter 'T' Both squadrons 'Stand By'
 - Morse letter 'M' Highest number squadron 'Stand By'
 - Morse letter 'O' Lowest number squadron 'Stand By'.
- b) Direct plotters' telephone lines were laid between the FAOR and the SOR. These enabled the AOC to follow the progress of all raids, and were first used during the Air Exercises of 1934 when the Inner Artillery Zone was fully-manned. For these exercises five sectors were equipped with searchlights, and the following sector searchlight tables were manned:
- Biggin Hill
 - Hornchurch
 - Kenley
 - Northolt
 - North Weald.

10.3.3 Teleprinters

- a) Experiments with teleprinters took place in October 1934 when three machines were hired for a period of three months to conduct tests between FAOR, Northolt and the Training Room (Hut 54) at Hillingdon House.
- b) The first machines supplied were simplex tape teleprinters, but were soon replaced with duplex machines, which provided two-way working. On this type of equipment the carriage was used as a receiver only, so these were soon abandoned and replaced with paper-roll type simplex teleprinters, which proved satisfactory. The result was two-fold:
- All sectors would use the teleprinters to transmit data to the Area Operations Room, of action taken on the AOC's orders
 - They could also be used for the transmission of weather and other intelligence reports from sectors.
- c) The AOC therefore recommended that all sectors should be equipped with paper-roll type simplex teleprinters, and that provision should be made within the FAOR, for one teleprinter connected to each sector. On 28 February 1936 the situation at Uxbridge, within the new mock-up operations room, consisted of seven paper-roll type simplex teleprinters for use with the following Sector Stations:
- | | | | |
|-------------|----------|---------|-------------|
| Biggin Hill | Northolt | Duxford | North Weald |
| Hornchurch | Tangmere | Kenley. | |
- d) Each of these stations had one paper-roll simplex machine, and in addition Uxbridge also had one simplex type teleprinter in Hut 54, and one in the old operations room.

10.3.4 Vertical Ground-Glass Plotting Screens

- a) During June 1938, experiments were conducted at Biggin Hill, using coloured rubber suckers applied to the rear of a vertical ground-glass screen on which a grid map was drawn. Each sucker had a number showing the minute in which the plot had been received, as indicated by a clock whose dial was divided into ten one-minute intervals, numbered 0–9. Labels indicating number and height were hung from the suckers and were visible through the screen.

10.3.5 The 'Standard' Sector Operations Room

- a) During the winter of 1934–5 certain structural alterations were made to the operations room at Hornchurch, as a result of the lessons learnt during the 1934 Air Exercises. Completed around May 1935, these were:
- Extend the length of the operations room part of the building, to provide for three R/T cubicles, and a monitoring R/T cubicle
 - Alterations to the roof of the operations room to provide a greater height over the dais, and extend the dais to two sides of the room to allow extra space for the controlling staff
 - Improve the ventilation of the room.
- b) Further experiments during this period were conducted at Hornchurch, and these involved the use of searchlight and sector operations tables. As a result of this experience, the following alterations were carried out at the end of December 1936:⁵⁶
- Removal of the searchlight table from the main operations room to an adjacent room, and to provide 'telling' facilities to this table from the main map table
 - Increase the scale of the main map table to one-inch to one mile, and then provide a map of this scale to cover all Observer Areas and Artillery Zones connected to the operations room
 - The Sector Commander should overlook the map table from the centre of the dais, and the map should be tilted towards him at approximately eight degrees.
- c) In this modified form, the Hornchurch SOR was accepted as the basis for new buildings being designed in 1937; existing buildings would also be upgraded.
- d) There were grand proposals to standardise the existing SORs at Duxford, Kenley, North Weald and Biggin Hill, all based on the Hornchurch model, though the latter was now due to be extended even further to include a new searchlight room. Another projected modification was to remove the earthwork traverses at all the stations, and replace them with reinforced concrete traverses.
- e) Extensions were to be carried out to just one building at any one time; the order of priority was Hornchurch (searchlight room only), North Weald, Duxford, Biggin Hill, and finally, Kenley. The fighter stations at Catterick, Church Fenton, Digby, Usworth, Tangmere, Wittering and Usworth were due to have an entirely new building (but there was no mention of Northolt).
- f) On 12 January 1938 a request was made to the Air Ministry regarding this matter. Lengthy communications followed concerning what was necessary and cost-effective. The latter responded by asking if the existing blocks should be gas-proofed and air-conditioned, a feature which was immediately rejected owing to the time-factor which would have been involved. The

⁵⁶ AIR2/651

new design – to drawing 5000/37 – would be constructed with above mentioned facilities on all the necessary airfields, at the rate of two per annum. (Northolt would be building 43).

- g) Urgency was the key at this point, as negotiations between Fighter Command and the Air Ministry had become very protracted, and threatened to continue along those lines, with 'new ideas' being suggested and modified at every opportunity. Fighter Command needed action and the request from Air Commodore Arthur C Maund, the AO-in-C Administration was for, '*some bold Mussolini in the Air Ministry to say "Do This".*' Proposed modifications to the interiors at a cost of £3,000 per station were rejected.
- h) Some changes were proposed to the original Northolt block, and it believed that these were in fact carried out. They were principally:
 - Necessary interior upgrades at the cost of £500, in line with those already completed at Hornchurch
 - The addition of a searchlight annexe room to the existing operations room. Unfortunately, this involved re-engineering and enlarging the protective traverse around the building.

10.3.6 New Standard Type Design

- a) In October 1937, drawing 5859/37 was submitted as a design for future fighter operations blocks, but it was criticised as having separate searchlight room, as was the case with the existing building. This was considered poor, but had been necessary owing to cost and time constraints, and it was further recommended that it should be a table in the main operations room. The soundproofing of the current three W/T chambers was inadequate and needed improving. Ventilation was deficient and needed a forced-draught system, especially for the W/T chambers. The net result of all of these ideas was incorporated into drawing 5000/37 which was then adopted as the standard SOR.
- b) New constructions, to drawing 5000/37, were then built at Catterick, Hornchurch, Northolt, North Weald and Swanton Morley.
- c) Notwithstanding the two changes carried out on building 27 at Northolt, as from 17 June 1940 it ceased as an operational operations room, and was replaced by Building 43. This new structure became the Northolt Sector Operations Block until it too was replaced by the Alternative Operations Block at Eastcote Place, as from 21.30 hrs on 28 February 1941.
- d) Building 27 at Northolt was then used for training sector controllers, despite a plea from the Post Office for the return of their equipment.

10.4 – Filter Rooms, Group, and Sector Operational Rooms

10.4.1 RDF Filter Room

- a) The function of the Filter Room as originally envisaged was to collate information from the RDF stations, to deduce the position of aircraft, and then forward this information on to the SORs for operational purposes. In June 1938 there was no permanent filter room at Stanmore but an experimental one had been designed there, on similar lines to one at the at the Bawdsey Research Station. The information from the RDF stations was plotted onto a table covering most of the east and south coasts of Great Britain, the North Sea, and the English Channel. The plots were indicated by counters, the shape of which showed the originating station, and the colours showed the five-minute period during which the information had been received by the

filter room plotter. Labels placed close to the track, indicated height, and number of aircraft where known.

- b) Filter Officers filtered these plots, the tracks of which were shown by arrows of the appropriate colour. Tellers then passed the grid references of the points of the arrows to Command, Group and Sector ORs.
- c) The whole sequence of events was overlooked by a controller who was seated on a dais.
- d) By July 1940 there were 20 or more RDF stations installed along the east coast, and more were being planned. It became apparent that the Filter Room at Stanmore would not be able to deal efficiently with the large amount of information that it was now receiving. It was therefore accepted that there was now a requirement to de-centralise the filtering process, so steps were taken to come up with a standard type design filter block, and build this close to nearly all of the group operations blocks. An exception was the 11 Group Operations Block at Uxbridge which was the only one that did not have a dedicated filter room.

10.4.2 Fighter Command Operations Room

- a) The function of the Fighter Command Operations Room (built by Sir Robert McAlpine, and completed December 1939) was threefold:
 - To effect the recognition of friendly aircraft
 - To provide information to the organisations concerned with AA ground defences, and air-raid warning
 - To allocate hostile raids to fighter groups.
- b) Information on incoming tracks was received by the filter room – from Royal Observer centres and other sources. This data was plotted by means of arrows on a map table. The colour of the arrow head was changed every five minutes according to the operations room clock. Unknown tracks of aircraft beyond a 50 mile recognition line from the coast were plotted with yellow-tailed arrows. If the track was then recognised as friendly, they were replotted with yellow-tailed arrows; if hostile, red-tailed arrows were used.. Any unknown track plotted closer than the recognition line was assumed to be hostile and plotted with blue-tailed arrows.
- c) Representatives from the Navy, and RAF Bomber and Coastal Commands were also present to assist in identification.

10.4.3 Group Operations Room, 1936–39

- a) One year on from its formation, the structure of RAF Fighter Command was divided into two groups:
 - 11 Group – Uxbridge, was formed 1 May 1936, and was tasked with the operational and administrative control of the defence of London
 - 12 Group, formed 1 April 1937. This group also formed at Uxbridge, before briefly moving to Hucknall and then to Watnall on 8 July 1940. Its area of responsibility was the industrial conurbation's of the Midlands.
- b) Four more groups formed in 1939 and 1940:
 - 15 March 1939 – 13 Group formed at Hucknall but later moved to Kenton Bar, Newcastle. It assumed control of the area north of York

- 1 June 1940 – 10 Group at Rudloe Manor, Box, Wiltshire. It was responsible for the defence of Plymouth and the South West
 - 26/29 Jun 1940 – 14 Group at the Drumossie Hotel, Inverness. Controlling Scotland, north of the River Tay⁵⁷
 - 9 August 1940 – 9 Group formed at Barton Hall, Preston for the defence of the North West, including Northern Ireland.
- c) At the end of January 1936, all operations at the old FAOR were transferred to the new 11 Group underground building, and the old one was dismantled in July of that year.
- d) The function of the Group Operations Room was to assist the Group AOC in his task of intercepting the raids for which he was responsible. It also had the secondary function of passing on Observer Corps information to Fighter Command and other Fighter Groups.
- e) A main map table was used to for the presentation of information obtained from the Filter Room and Observer Corps centres. Illuminated squadron indicator 'tote' boards were sited on a wall behind the main map table. These displayed the current state of each squadron and flight and the most recent orders issued to it. In order, these were:
- | | | |
|----------------------|-----------------------------|--------------------|
| Released | Available, 30 minutes | Available |
| Ordered to Readiness | At Readiness | Ordered to Standby |
| At Standby | Ordered on Intercept Patrol | Left Ground |
| Detailed to Raid | In Position | Enemy Sighted |
| Ordered to Land | Landed and Refuelling. | |
- f) The commander telephoned the orders to the appropriate sector station, and when this order had been carried out, this fact was notified to Group by teleprinter. It was then indicated on the appropriate board by a change in the current state indication of the particular flight involved. Near the squadron indicators were dials showing the direction and strength of the wind at various heights, using data received by teleprinter. On the map table both hostile and friendly plots were plotted by means of counters. Against each incoming track was placed a block displaying the number of aircraft and height. Friendly tracks were indicated by adding a distinctive label to this block.
- g) When a squadron or flight was ordered into the air to deal with a hostile raid, this was indicated on the map table by means of a label which gave the squadron number and colour of the flight. When allotted to a particular raid, this label was attached to the block appropriate to that raid.

10.4.4 The Sector Operations Room, in December 1938

- a) The function of the SOR was to assist the Sector Commander in his task of intercepting raids allotted to him by the Group AOC, and of effecting the return of his fighters.
- b) Information was obtained by telephone from the Filter Room, the Observer Corps centres, and from adjacent sectors. Tracks were plotted in the normal way on a map table showing all the sectors in 11 Group, together with sufficient information to show the neutral zone between 11 and 12 Groups.

⁵⁷ Initially formed 20 Jan 1940 as No.14 (Fighter) Group, but disbanded 22 Jun 1940

- c) Surrounding the table, were telephone and teleprinter points which enabled information to be sent directly from the various Observer Corps centres, and other sources of information, such that it could then be plotted directly on the table. Colours were used to indicate progress:
- The master clock was split into 12 five-minute periods
 - Each 15-minute period had consecutive red, yellow and blue triangular-shaped batons
 - These colours were also shown by means of a light on the main table.
- d) Plotters indicated on the table, the course and position of enemy raids, by placing on the map arrow-head counters of red, yellow or blue – whichever corresponded with current time colour. Counters were removed at the end of each five-minute period, in such away that not more than two colours appeared on the table at one time, hence plots could not be more than ten minutes old.
- e) For any raid a block would appear on the table showing either the raid number in white on a black plaque to indicate an enemy raid, or letters in white on a red plaque for friendly aircraft. The number of enemy aircraft was shown in white on a red counter, and the height was shown in white on a blue counter. A further addition was made to this block when fighter aircraft were detailed to intercept it. This addition took the form of a pin on the end of which was a metal plaque.

10.4.5 Display of Friendly Aircraft

- a) These were shown accordingly:
- Squadron – a square plaque with yellow background and numbers shown in black figures
 - Flight – a circular plaque in flight colours with the squadron number in white figures
 - Section – a triangular plaque in section colours with squadron number in white figures:
 - 'A' Flight No.1 Section Red
 - 'A' Flight No.2 Section Yellow
 - 'B' Flight No.3 Section Blue
 - 'B' Flight No.4 Section Green.
- b) Information to Sector 'Z' came in from the Sector Stations at Kenley and North Weald, and the following Observer Corps Centres:

Bedford	Colchester	Horsham	Winchester
Bromley	Oxford	Watford.	

10.4.6 Ground Signals

- a) Ground signals were to be provided for each squadron under the orders of the Squadron Operations Officer. The signals were to be displayed outside the Squadron Operations Office, and consisted of 12 inch wide white wooden strips, displayed on a six foot square black background.⁵⁸ Discs were 18 inches in diameter. The significance of the patrol position discs, as far as Sector 'Z' was concerned, was as follows:

No disc	Patrol Northolt	One disc	Patrol Maidenhead
Two discs	Patrol Chesham	Three discs	Patrol Hatfield.

⁵⁸ AIR 16/285

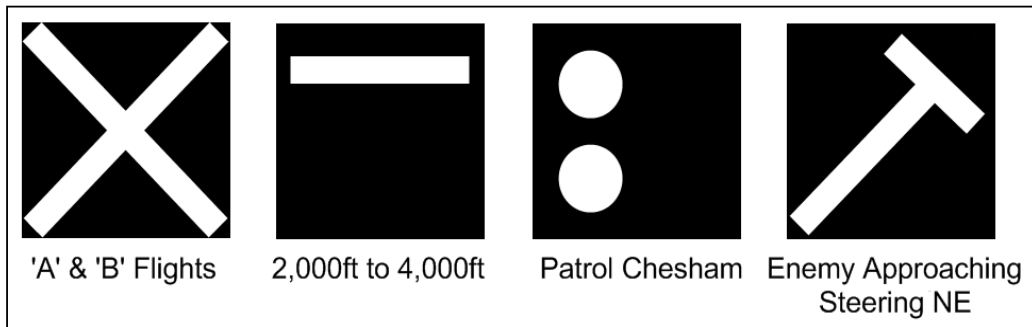


Fig. 22: Example of ground signals which may have been displayed at Northolt

10.4.7 Operation of Squadrons

- a) A squadron was a medium-sized flying unit (originally based on the French model) under the command of a squadron leader. During WWI fighter squadrons were equipped with varying numbers of aircraft and often consisted of three flights 'A', 'B' and 'C', which could be based at different aerodromes. Between the wars, a typical squadron became a smaller unit of 12 aircraft, but as WWII approached, its strength was increased to 18. The number of operational flights in a fighter squadron during WWII was normally two – 'A' and 'B'. Except when resting, flights were sometimes detached to operate in another sector, but were often then detached to operate in the same sector. Operational flying was only carried out at squadron or flight strength during major battles; at other times sections of 2–4 aircraft would be used. These fighters would all be provided by the same flight and the section would be identified for control purposes by the name of a colour – 'Red Section', 'Green Section' etc.
- b) The Sector Commander was in telephone communication with the aerodrome, and radio telephone communication with his flight or section leaders in the air. When an order allotting a raid was received, sufficient plots on the raid would have appeared on the map table to enable its speed and general direction to be calculated. The Sector Commander then estimated the course to be flown by his fighters (allowing for wind), so that they would arrive on the approximate track of the raid, and ahead of it. He ordered the fighters to fly this course at the reported height of the raid. Checks on the position of the fighters were obtained at one-minute intervals by means of a wireless transmitter in the flight leader's aircraft. D/F bearings were taken on this signal by three suitably placed ground stations in the sector. In 1938 this information was telephoned to the SOR where grid references were calculated. Observation of enemy track and the fighters' track then enabled the AOC to issue suitable instructions to bring about an interception.⁵⁹
- c) The Group Controller, or the Sector Controller ordered squadrons to certain stages of preparedness for action. The following terms were used:
 - **Released** – A squadron, flight or section in this state would not normally be required for duty until the end of the period specified in the release order, when it would then return to a state of 'available'. A squadron or flight on landing from patrol was automatically released while refuelling and rearming was being carried out. In the absence of further orders, the squadron or flight was to remain at readiness as soon as the current operations were completed

⁵⁹ AVIA 7/167

- **Available** – This unit was in a position to leave the ground within a 15-minute period. The aircraft were to be on the tarmac ready to start up, and the pilots were to be in the vicinity of the pilots' room when dispersed. Pilots were not required to be dressed in flying kit
- **Readiness**– A squadron or flight at 'readiness' was in a position to leave the ground in five minutes. Fitters were to be prepared to start engines, pilots were to be in flying kit in the pilots' room or in the vicinity of their aircraft. Aircraft were either to be on the tarmac, or at their dispersal points where a telephone was made available to the squadron operations officer
- **Stand By** – The unit must be ready to leave the ground within two minutes. Aircraft were to be in position on the aerodrome with engines running, ready to take-off. Pilots were to be seated in cockpits maintaining an R/T watch.

10.4.8 Order to Aircraft Codes

Standardised codes issued to aircraft were as follows:

- *Scramble 330* Take-off on course 330 degrees at normal climbing / cruising speed
- *Angels 10* Climb to 10,000 feet.
- *Vector 45* Change to course 45 degrees
- *Buster* Increase to predetermined 'full-speed'
- *Liner* Reduce to normal cruising speed
- *Gate* Increase to maximum permissible speed (for five minutes only)
- *Orbit* Circle and search
- *Bandit* Enemy aircraft
- *Tally Ho* Enemy sighted
- *Pancake* Return and land.

10.4.9 The Emergency Sector Operations Room

- An EOR was one which was occupied on a temporary basis only. It had limited communications, and was designed to be used, by day and by night, for a maximum period of three-weeks. They were established in requisitioned property, close to the local telephone exchange, and could be manned by 90% of the normal operations room staff. R/T cubicles in existing SORs were also manned and were used as local R/T relays for the EOR. Kenley and Biggin Hill were exceptions, as at these two stations arrangements had already been made to relocate their transmitting and receiving stations. Stand-by TR9D sets were also available for emergency use, should the aerodrome transmitting and receiving stations, or power and communication cable runs be damaged due to air-raids.
- In order to provide local VHF R/T control, R1132 ground receivers, and T1131 transmitters were provided for use in each EOR.
- The operations teleprinter was removed from the SOR to the EOR but administration, intelligence teleprinters remained on the aerodrome until alternative accommodation could be found locally.⁶⁰

⁶⁰ Following the raid of 31 August 1940 at Biggin Hill that destroyed hangars and the SOR, all aerodrome sections had been dispersed into the locality. Station Headquarters to a house in Leaves Green (1.5 miles), Equipment Section and Barrack Stores to a house called 'The Mount', Westerham Hill (2.5 miles), Sick Quarters and Works and Bricks to a pair of houses (2.5 miles) and Workshops to a house three miles away - AIR 16/668

- d) The EOR at Northolt was in two shops – 1 and 2 Shops, Victoria Road, adjoining Ruislip Manor Station – and first came into use at the beginning of September 1940, becoming fully-operational at 18.00 hrs on the 5th. (One of the shops was used by an insurance company).

10.4.10 Alternative Sector Operations Room

- a) An AOR was a fully-functional operations room, located away from the aerodrome, providing full sector facilities. It was necessary to remove some of the essential equipment from the station SOR in order to service the AOR, but the former could be reoccupied at a moment's notice with a short-term reduced capacity.
- b) In the middle of February 1944, Northolt ceased to be a Sector Station of 11 Group, and became a forward aerodrome within the Tangmere Sector. The Operations Room at Eastcote was then closed down. This was a direct result of the Polish squadrons moving to the Advanced Landing Grounds in Sussex.

Table 16 – Alternative and Emergency and Operations Rooms		
AIR 20/2095 & AIR 16/668		
Alternative Operations Rooms (AOR)		
Aerodrome	AOR Address	Distance from Aerodrome
Biggin Hill	Towerfields, Keston Mark	3 miles north
Debden	Saffron Walden Grammar School	
Duxford	Sawston Hall	
Northolt	Eastcote Place, Ruislip	
Hornchurch	Masonic Hall, Romford (also shown as Longford)	4 miles
Kenley	The Grange, Old Coulsdon	1 mile south
North Weald	Blake Hall, Bobbingworth, near Ongar	
Tangmere	St James' School, Chichester	
Emergency Operations Rooms		
Aerodrome	EOR Address	Distance from Aerodrome
Biggin Hill	A block of flats adjoining 'Pantiles'	1 mile and 100 yards from local Exchange
Coltishall	31 Colegate, Norwich	
Debden	A hut (another source suggests a disused quarry on Saffron Walden /Debden Road)	1.5 miles from Saffron Walden Telephone Exchange
Digby	<i>The Green Man</i> , Blankney Heath	
Duxford	In grounds of Sawston Hall,	Adjoining Sawston Telephone Exchange
Hornchurch	200 Warrington Road, Rainham	2 miles and 450 yards from Rainham Telephone Exchange
Kenley	11 Godstone Road, Caterham	2 miles and 100 yards from Caterham Telephone Exchange
Middle Wallop	Swan Hotel Yard, Winchester Street, Salisbury	
Northolt	1 & 2 Shops, Victoria Road, Ruislip Manor	1 mile west from aerodrome and 400 yards from Ruislip telephone exchange
North Weald	Ongar GPO Exchange	4 miles
St Eval	Farm Barn	
Tangmere	36 East Street, Chichester	3.5 miles and 350 yards from Chichester Telephone Exchange

Part 11 – Gazetteer of Building Types (Airfields)

11.1 – Operations Building for 1, 2 or 3 Squadrons

1161/24, UHD/1167/C/29 & 1211/24 Operational Bomber and Fighter Stations

Introduction: This single-storey bungalow-like building was the first example of an operations room for RAF stations, and examples were built at nearly all of the pre-expansion period stations. The original specification required that, on fighter stations, the building should be protected by earth traversed blast walls. This was not required for bomber stations, but at Bicester and Upper Heyford, thick-section brick traverse blast walls were built instead, although this may have been a later addition. On a fighter station the building was built as a fully-detached structure with earthwork traversed blast walls, while at bomber stations it was positioned immediately behind the station offices, and was link-detached by a brick corridor connecting with the hall of the Station Headquarters (SHQ). On fighter stations a basement containing a coal-fired heating chamber was provided; this facility was also found on bomber stations where heating could not be supplied from the SHQ.

Architect: C H Andrews

Construction: External walls were 13.5in solid brick, while internal room dividers are 9in brick; windows are steel casement. The roof was King-post type timber-framed trusses supporting timber boarding and slates.

Rooms: Operations room, signals office, wireless room, battery room, PBX (telephone exchange), store and W/T workshop.

Dimensions: 27ft 3in by 97ft 9in (footprint of building). Earthwork traverses were 16ft 2in wide and 6ft high.

Surviving Examples: Bicester, Duxford, Filton, Hawkinge, Northolt, Upavon, Upper Heyford

Demolished Examples: Biggin Hill, Hornchurch, Kenley, North Weald, Tangmere



Plate 13: The Operations Block at Upavon with earth traverses.

Photo: 1994

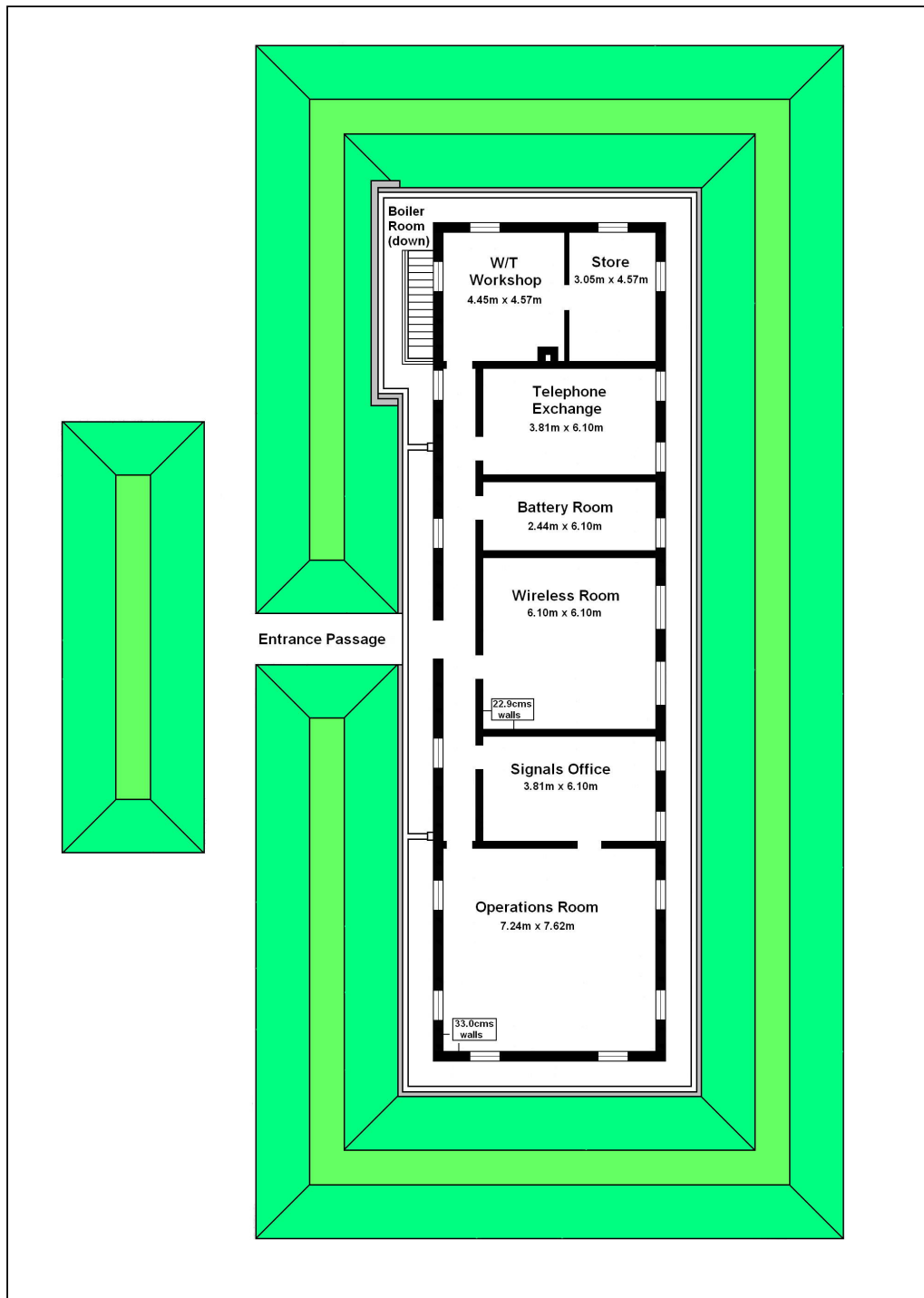


Fig. 23: Operations Building for 1, 2 or 3 Fighter or Bomber Squadrons
Drawing: 1161/24. Ground Floor Plan

11.2 – Station Offices with Photographic Section

1443/24 & 912/25

Operational Bomber and Fighter Stations

Introduction: This was a two-storey office building with a rectangular-shaped plan-form. It was positioned on one side of the main entrance gates and faced the guardhouse. A similar building was built at fighter stations, but was detached; with minor modifications, this building type became the standard design of RAF SHQ until replacement in 1934. At the rear of the bomber version was the link-detached Operations Block (described above).

Architect: unknown – original drawing does not survive.

Construction: Permanent brick, windows were timber-framed sashes. Roof was timber-framed clad with boarding and covered in slate.

Rooms: Basement – boiler room.

Ground floor – central corridor connecting with offices associated with the running of the station. A central corridor (at right-angles to the other one) connected with the operations room.

First floor – functioned originally as the photographic section. Other rooms at this level included a wireless telegraphy lecture room, and camera obscura.

Dimensions: 31ft by 72ft (footprint of SHQ)

Surviving Examples: Bicester, Upper Heyford, Duxford, Northolt, and Gosport are similar.



Plate 14: Station Headquarters Building at Upper Heyford

Photo: 1998

11.3 – Station Headquarters and Operations Block

2934/35 Operational Bomber Stations

Introduction: This was a two-storey office block with a flat roof; on either side there was a single-storey wing with timber-framed pitched roof having hipped-shaped rafters. The 'H'-shaped complex was in three main parts, the main components being the SHQ and Operations Block. Between these two was a lateral corridor with toilets, staircase and offices. The building occupied a prominent position with the front elevation facing the main gates so that the operations room was at the rear, facing the technical area of the station. The Operations Block was single-storey, having a rectangular-shaped plan-form with a bungalow-like elevational treatment similar to the 1924 design. It also had a comparable pitched roof of timber construction with hipped-shaped rafters.

Architect: A Bulloch

Construction: External walls were mainly 15in cavity brick, with one wall (part of a veranda at the rear) being 11in cavity brick. Internal walls were mainly 9in, but also 13.5in and 4.5in in places. Windows were timber-framed sashes. The wall arrangement for the Operations Block was similar to the SHQ and its roof, and those above both wings were timber-framed – with hipped-shaped rafters clad with tiles. The roof over the central part of the SHQ was reinforced concrete slab.

Rooms: Ground floor – central corridor and hall and connecting corridor to stores and accounts offices, sergeant major's office, assistant accounts officers, waiting room, two orderly rooms, telephone room, engineer clerk, engineer officer, adjutant, and CO's office.

A corridor connected with toilet facilities, a signals officer's office, and then onto the Operations Block. Here room sub-division was – battery charging room, wireless room, meteorological office, signals office and operations room, SHQ

First floor – library, two lecture rooms, clerk, cloakroom with toilet, and Education Officer.

Dimensions: 27ft 4in by 147ft 9in

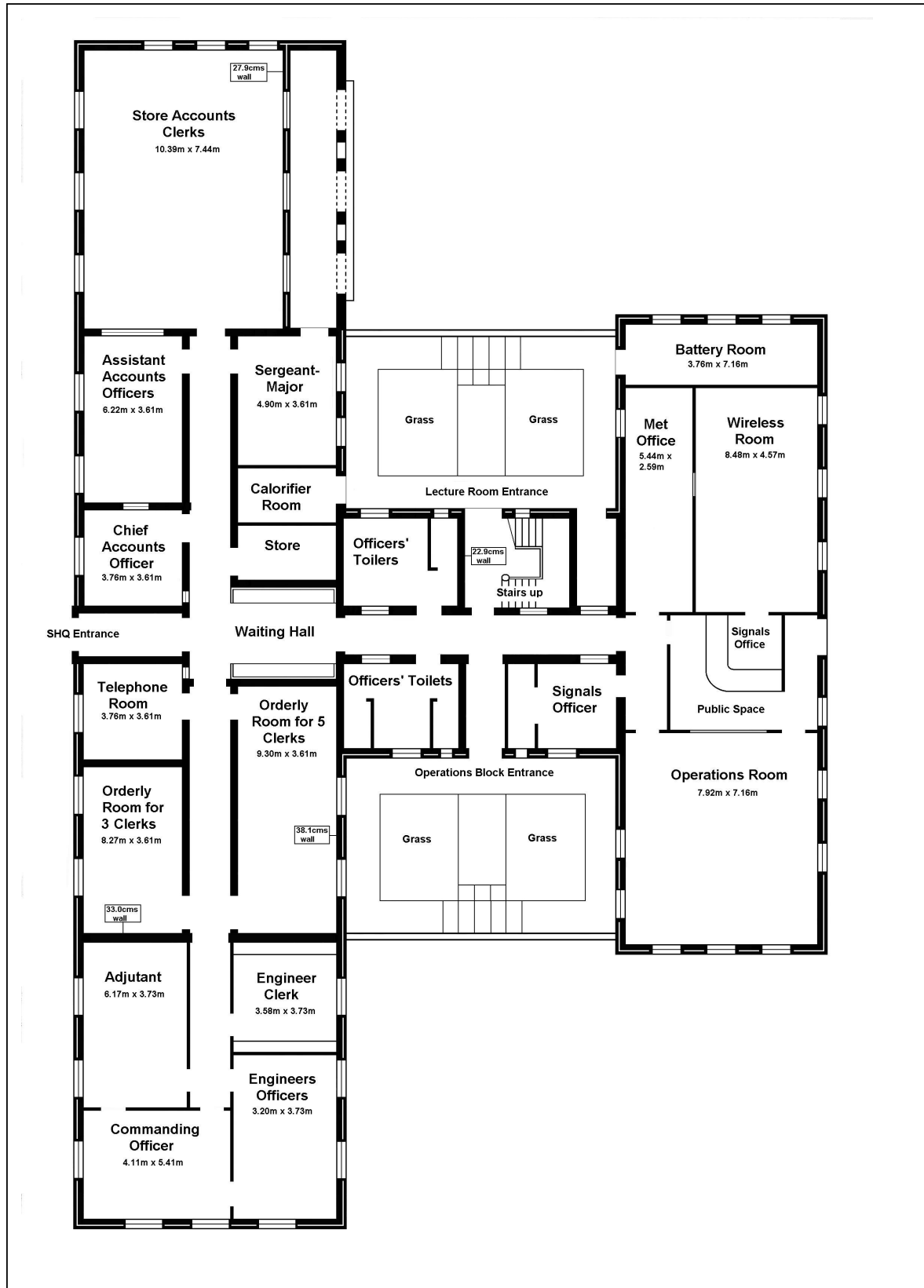


Fig. 24: Station HQ, Offices and Operations Block
Type: 2984/35, Ground Floor Plan

11.4 – Station Headquarters and Operations Block (Protected Roof Design)

1723–1729/36

Operational Bomber Stations

Introduction: This was a two-storey protected roof design SHQ that was built in a prominent position facing the main gates to the station and adjacent to the Guardhouse. The operations room was at the rear, facing the station technical area. The SHQ had a central two-storey element with a flat reinforced concrete slab roof, and on either side of this was a single-storey wing that also featured concrete roofs. This was a third generation bomber design SHQ which replaced 2985/35 and, with a few minor modifications, it became the standard RAF SHQ/Operations Block design at bomber stations between 1936 and 1939. In plan-form it was 'H'-shaped, consisting of three parts – the main components being the SHQ offices and block. In its original form, it was designed without a meteorological section (only a small office in the Operations Block). From 1937 some examples of this type were modified – a typical example being Bassingbourn – by the addition of a second floor over the central block, to drawing 8550/37.

Between these two main parts was a lateral corridor with toilets, staircase, hall and offices. This part of the building was more substantially built than the offices, as it also functioned as the main escape route from the operations room should it become damaged during an air-raid.

The Operations Block was a completely new design from the previous version, and consisted of a rectangular-shaped plan-form building, protected by its reinforced concrete roof, as well as by thick-section full-height composite (concrete/brick) traversed blast walls that were separated from the main building by a 5ft wide passageway.

Architect: P M Stratton

Construction: External walls were mainly 15in cavity brick wall, with one wall of 11in cavity brick. Internal walls were mainly 9in, but also having 13.5in and 4.5in. The central corridor/stairs annexe between the SHQ and operations room had cavity walls 20in thick. Windows were timber-framed sashes. Roof was reinforced concrete slab. The exterior walls were solid 18in thick.

Rooms: Ground floor – central corridor and hall and connecting corridor to stores, accounts offices, sergeant major's office, assistant accounts officers, waiting room, two orderly rooms, telephone room, engineer clerk, engineer officer, adjutant, and CO's office.

A corridor connects with toilet facilities, a signals officer's office and finally to the operations room, battery charging room, wireless room, meteorological office, signals office, and the operations room.

First floor – library, two lecture rooms, clerk, cloakroom with toilet and Education Officer's workplace.

Dimensions: SHQ: 147ft 8in by 31ft 10in (footprint)

Examples: Bassingbourn, Bircham Newton, Horsham St Faith, Honington, Middleton St George, Scampton, Upwood

Plate 15:



Plate 16: The Operations Block at Scampton at the rear of the SHQ
Note: it is without its composite traverse blast walls. Photo: 2004



Plate 17: The SHQ at West Raynham (Norfolk)



Plate 18: Coltishall (Norfolk) Operations Block
Type 1723/36 with blast wall extant



Plate 19: Coltishall – another view of the Operations Block

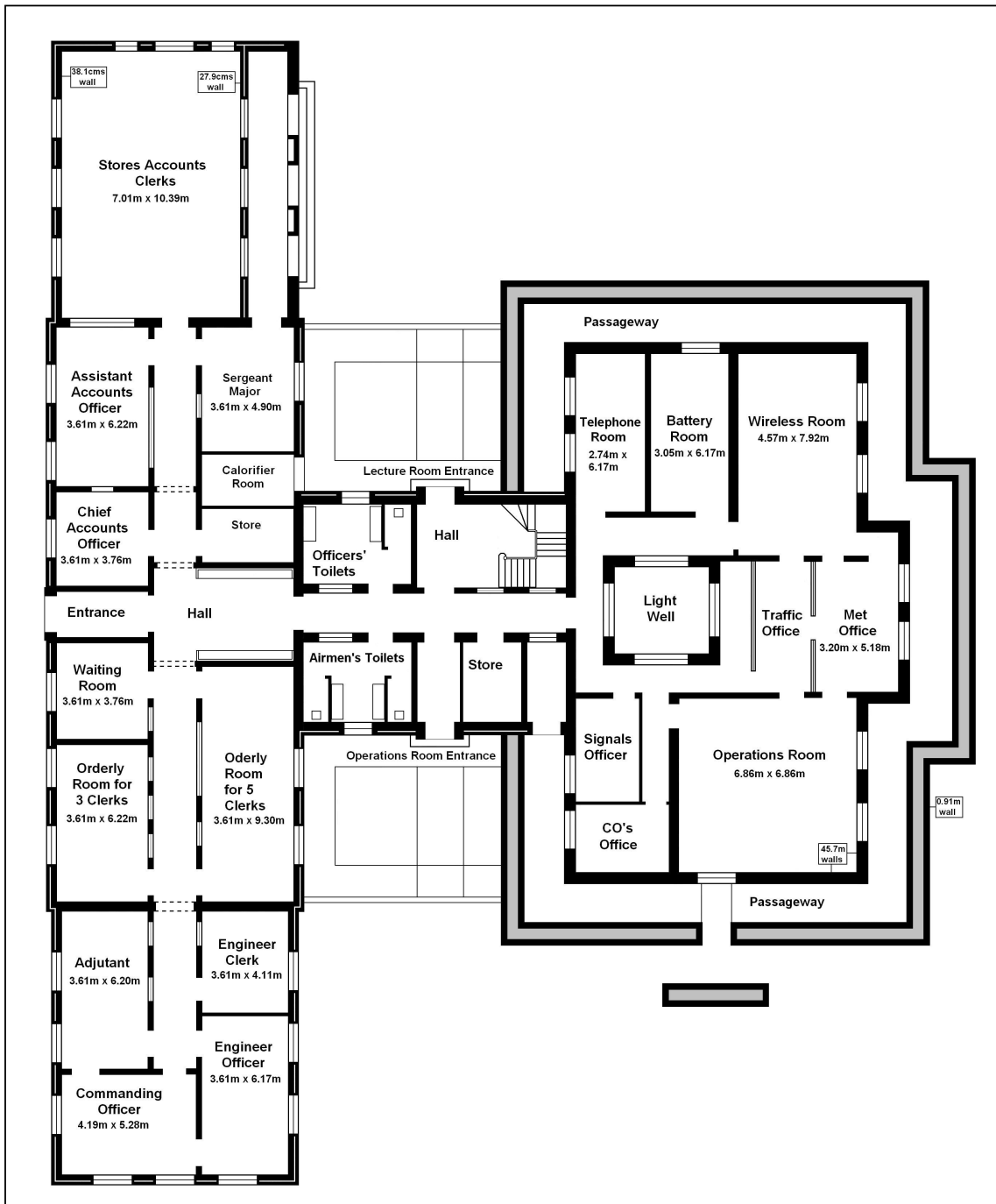


Fig. 25: Station HQ and Operations Block,
1723/36, Ground Floor

11.5 – Fighter Operations Block

5000/37 & 16266/39

Operational Fighter Stations – (Protected Roof Design)

Introduction: In 1937, a new protected roof design of Operations Block for sector fighter stations was conceived to replace 1161/24. This second-generation fighter design was built at new, as well as a few existing fighter stations that were upgraded to sector station status. A major change to the plan-form occurred in 1939 which created a much larger floor area from the original design, whereby extra offices were added. This was carried out to drawing 16266/39.

Architect: J H Binge and F Hawbest

Construction: Solid 18in thick brick walls supported a protected roof consisting of thick and thin concrete slabs separated by a 4ft 6in void. The void was filled with a lower layer of sand and shingle and an upper layer of shingle only. The wall separating the two concrete slabs was faced on the outside with facing bricks, and had an inner skin of reinforced concrete. The whole building was surrounded by a full-height concrete-lined earthwork traversed walls which featured two angled protected gaps forming the entrances.

Rooms: Operations room, searchlight room, ventilating plant, plotting room, traffic office, receiving room, telephones and workshop.

Additional rooms (16226/39) – rest rooms, signals and cypher rooms, workshops and toilets.
Both entrances have air-locks.

Examples: Catterick, Debden, North Weald, Ouston, Swanton Morley



Plate 20: General view of Operations Block at Swanton Morley (Norfolk)

Photo: 1996



Plate 21: Detail view of Entrance through earthwork traverses, Swanton Morley



Plate 22: Catterick (Yorkshire) Operations Block
Photo: 1998

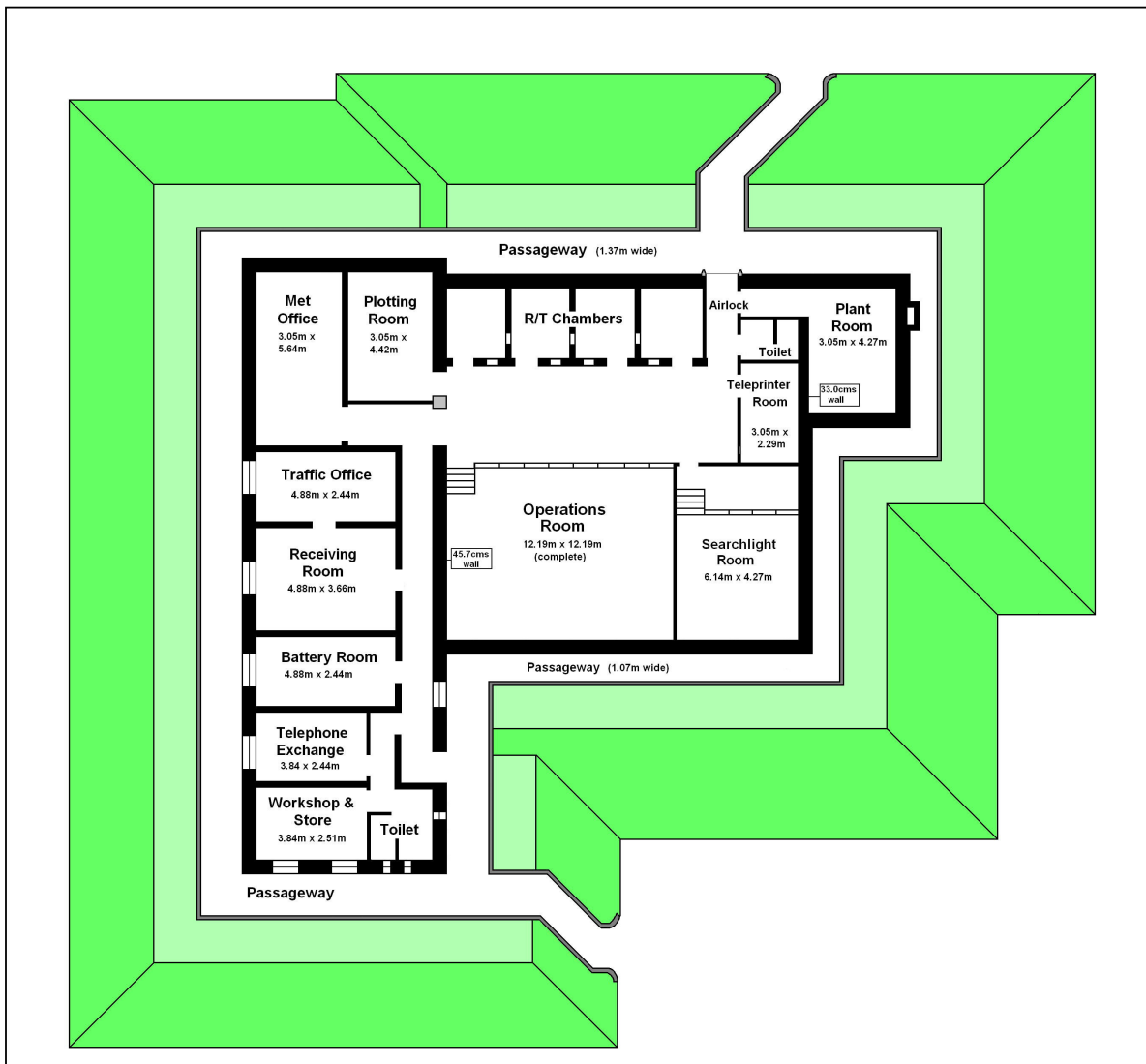


Fig. 26: Fighter Operations Block, 1937
Drawing 5000/37, Ground Floor Plan

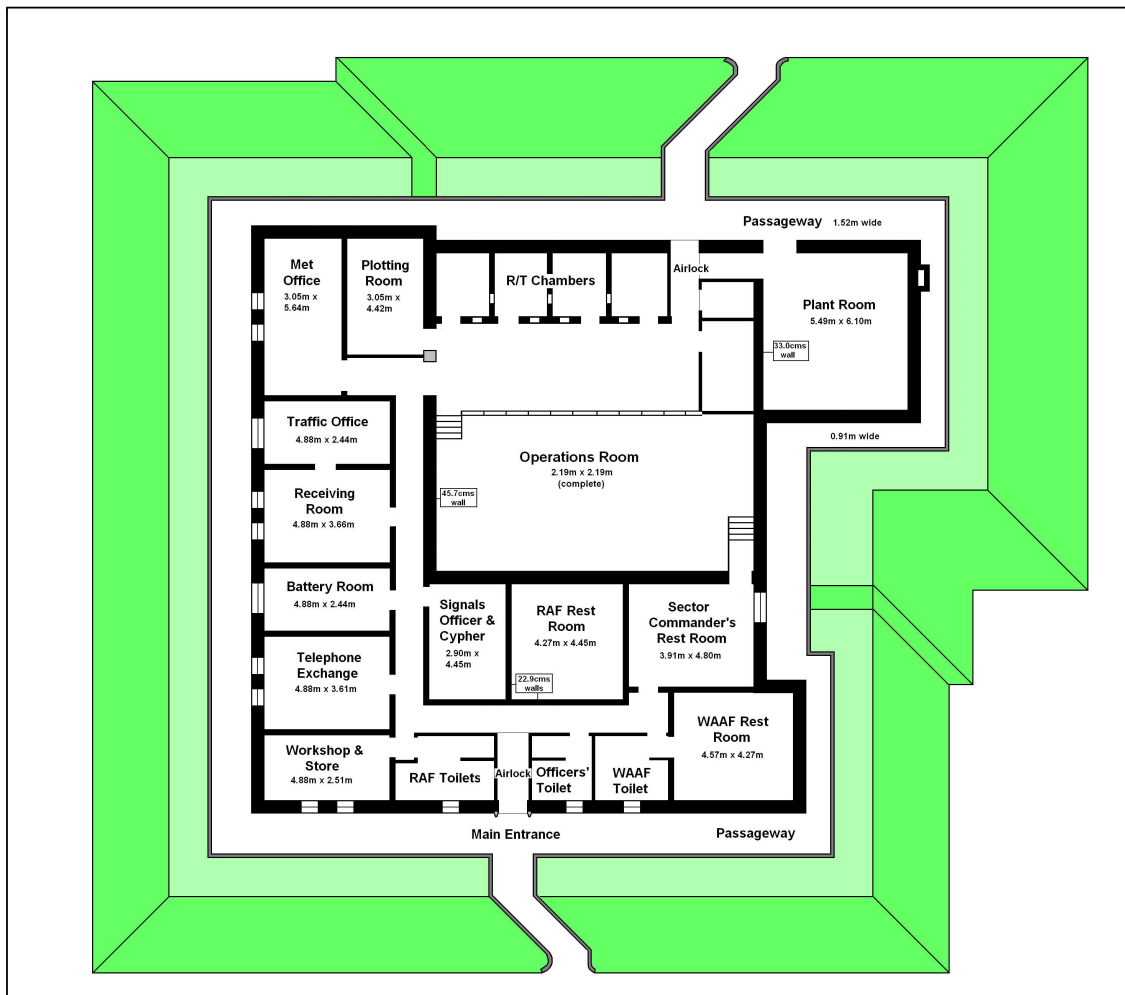


Fig. 27: Revised Fighter Operations Block, 1939
Drawing 16266/39, Ground Floor Plan

11.6 – Station Headquarters and Operations Block

15386/40 & 7103/41

Bomber Stations Operation Training Units

Introduction: Built exclusively on Bomber OTU stations, this was a single-storey complex arranged as two main parts consisting of the SHQ and the Operations Block. These were joined together by a corridor that functioned as an air-lock.

Architect: unknown

Construction: The SHQ was a standard temporary brick 28ft span hut with exterior and interior piers at 10ft centres. The interior was sub-divided by 4.5in brick walls, arranged with a central corridor and offices positioned on either side. The exterior walls were cement rendered, windows were multi-pane steel casements, and roof trusses were steel pitched units clad with corrugated asbestos sheeting.

The Operations Block was constructed with exterior walls of cement rendered 13.5in solid brick, interior walls being mainly 9in solid brick. The roof was reinforced concrete slab.

Rooms: SHQ – 18 offices, exact arrangement unknown as original drawing not available.

Operations Block – operations room, searchlight room, ventilating plant, plotting room, traffic office, receiving room, telephones and workshop – exact arrangement unknown.

Examples: Aldermaston, Ashbourne, Bottesford, Bruntingthorpe, Chelveston, East Kirkby, Framlingham, Goxhill, Hardwick, Harwarden, Hixon, Honeybourne, Horham, Market Harborough, Marston Moor, Membury, Molesworth, Podington, Polebrook, Shipdham, Snaith, Thurleigh, Tilstock, Westcott.



Plate 23: Ridgewell (Essex) Operations Block

Viewed from the air lock and AC/plant/boiler house end (SHQ demolished). Photo: 05-03-82



Plate 24: Halesworth (Suffolk) Operations Block

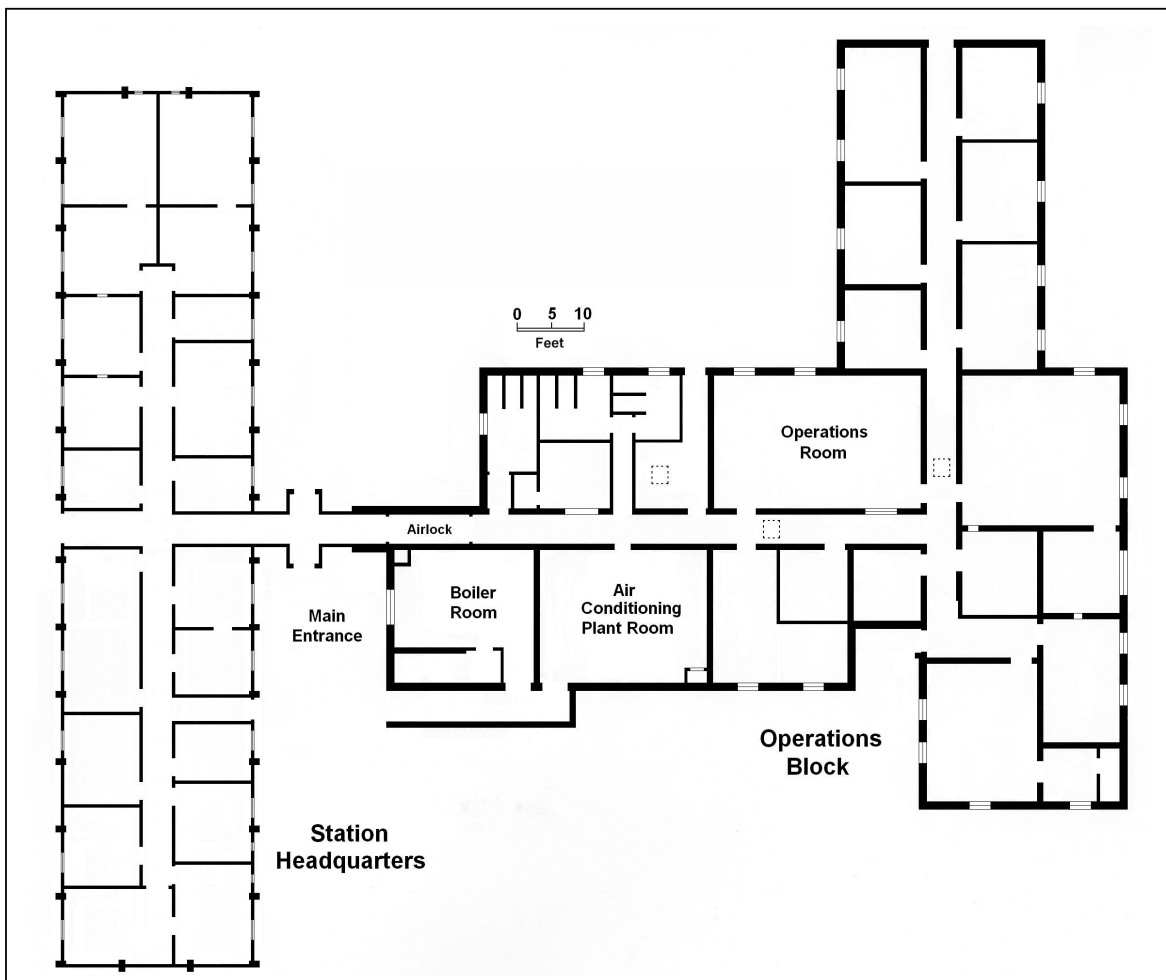


Fig. 28: Operations Block and Station HQ
Drawing 15386/40, Operational Training Unit Stations

11.7 – Operations Block and Crew Briefing Room

13023/41 & 13742/41

Operational Bomber Satellite Stations

Introduction: Located on the dispersed administration site of second-generation bomber satellite stations that were built before 1942, this complex was constructed partly in brick and partly in Nissen hutting. It was in three parts, the main component being the Operations Block which was joined to a central entrance annexe of temporary 4.5in brick construction with a flat timber roof, and this connected with the Crew Briefing Room. Design 13023/41 was slightly different from 13742/41, in that it had a small toilet block built on an end wall of the Operations Block.

Architect: J Hawbest

Construction: Operations Block had external walls of 13.5in and 9in brick internal walls, these supported a roof of reinforced concrete slab. Crew Briefing Room was a standard 24ft span Nissen.

Rooms: Operations Block – operations room, PBX and teleprinter room.

Entrance Block – main entrance and lobby, kitchen, and toilets.

Crew Briefing Room – hut arranged open-plan.

Dimensions: Operations Block – 20ft 3in by 33ft (footprint).

Entrance Block – 18ft by 26ft.

Crew Briefing Room 13742/41 – 24ft span by 30ft 2in (5-bays).

Crew Briefing Room 13023/41 – 24ft span by 42ft 3in (7-bays).

Examples: Beaulieu, Burn, Chedburgh, Nuneaton, Metfield, Miltown, Tarrent Rushton, Turweston, Woolfox Lodge, Wrattling Common



Plate 25: Burn (Yorkshire) Operations Block



Plate 26: Burn Crew Briefing Room Nissen hut
Both photos: 1983

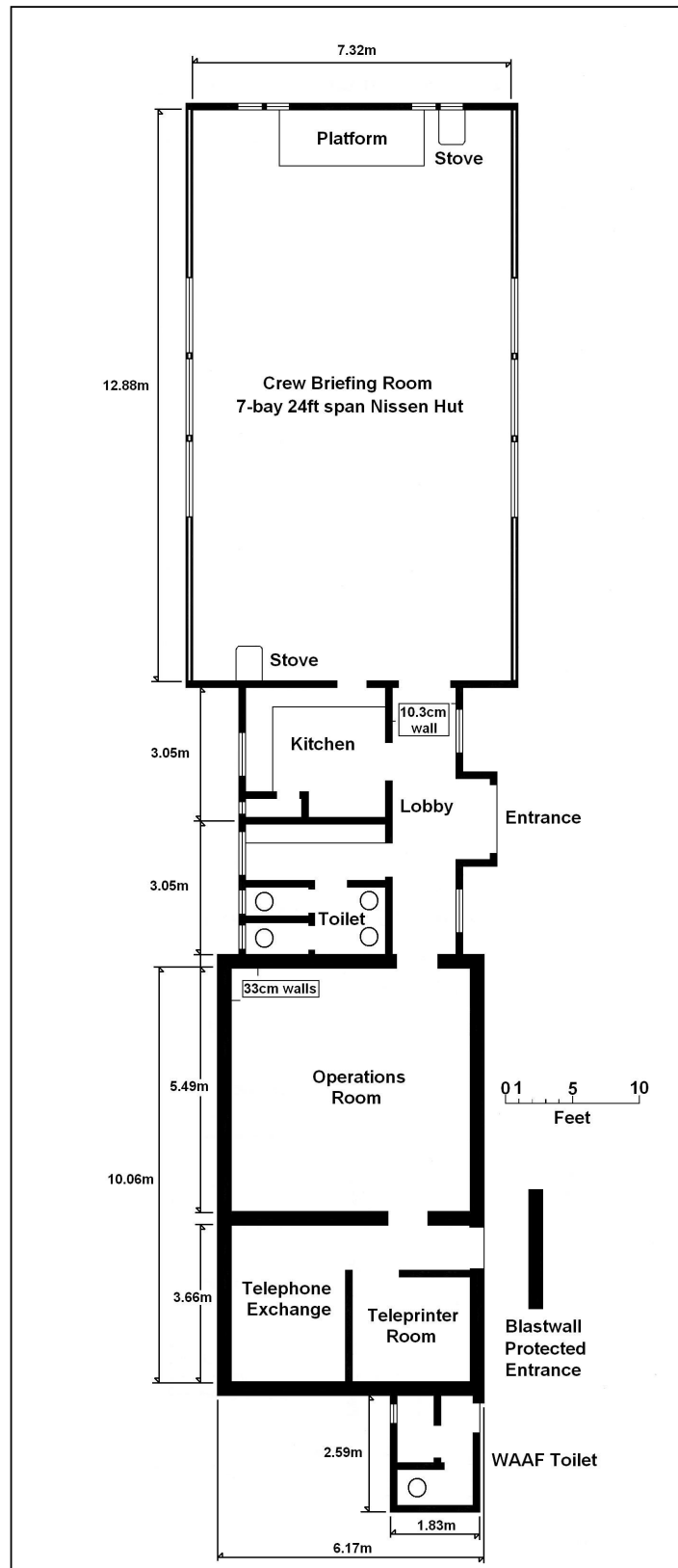


Fig. 29: Operations Block, Bomber and OTU Satellite Stations

Drawing: 13023/41

11.8 – Watch Office with Operations Block

15898/40, 7344/41, 7345/41, 13079/41 & 4170/43 – Bomber Satellite Stations

Introduction: The Watch Office with Operations Block, on the first generation of WWII bomber satellite stations, went through many extensions and alterations resulting from a continuous upgrading programme of the airfield facilities throughout the course of the war. There were two main types, known as ‘A’ and ‘B’, and these were originally built on similar lines to a standard temporary brick hut, but with modifications.

Firstly, thickened walls were added for the Operations Block, to drawing 7344-5/41. In this form the central ground floor walls could now receive a first floor addition in the form of an observation room. This was built above half of the length of the load-bearing walls – sited on its flat reinforced concrete roof. Also at this time a 24ft span Nissen hut was added to the end of the complex, to become a new Crew Briefing Room.

Later still in 1943, came the final extension, when the first floor observation room was doubled in size using the other half of the roof to create a control room. This feature was only added to a few buildings.

Architect: J Hawbest

Construction: Originally constructed as a cement rendered 4.5in brick hut, the central section was later thickened to 13.5in (operations room). The observation and control rooms were both 9in cement rendered brick. Windows were steel-framed casements.

Rooms: Ground floor – watch office, operations room, crew room, and toilets.

First floor – observation or control room (depending on how the building was developed).

Examples: Alconbury, Atherstone, Attlebridge, Balderton, Bardney, Blyton, Bodney, Bourn, Bungay, Docking, Downham Market, East Moor, East Wretham, Edge Hill, Grafton Underwood, Graveley, Great Massingham, Hampstead Norris, Harlaxton, Hinton-in-the-Hedges, Ingham, Kimbolton, Kirmington, Langar, Long Marston, Marsworth, Mount Farm, Oakley, Oulton, Rufforth, Saltby, Seighford, Skellingthorpe, Stanton Harcourt, Tholthorpe, Tibenham, Waltham, Warboys, Warton, Woodhall Spa.

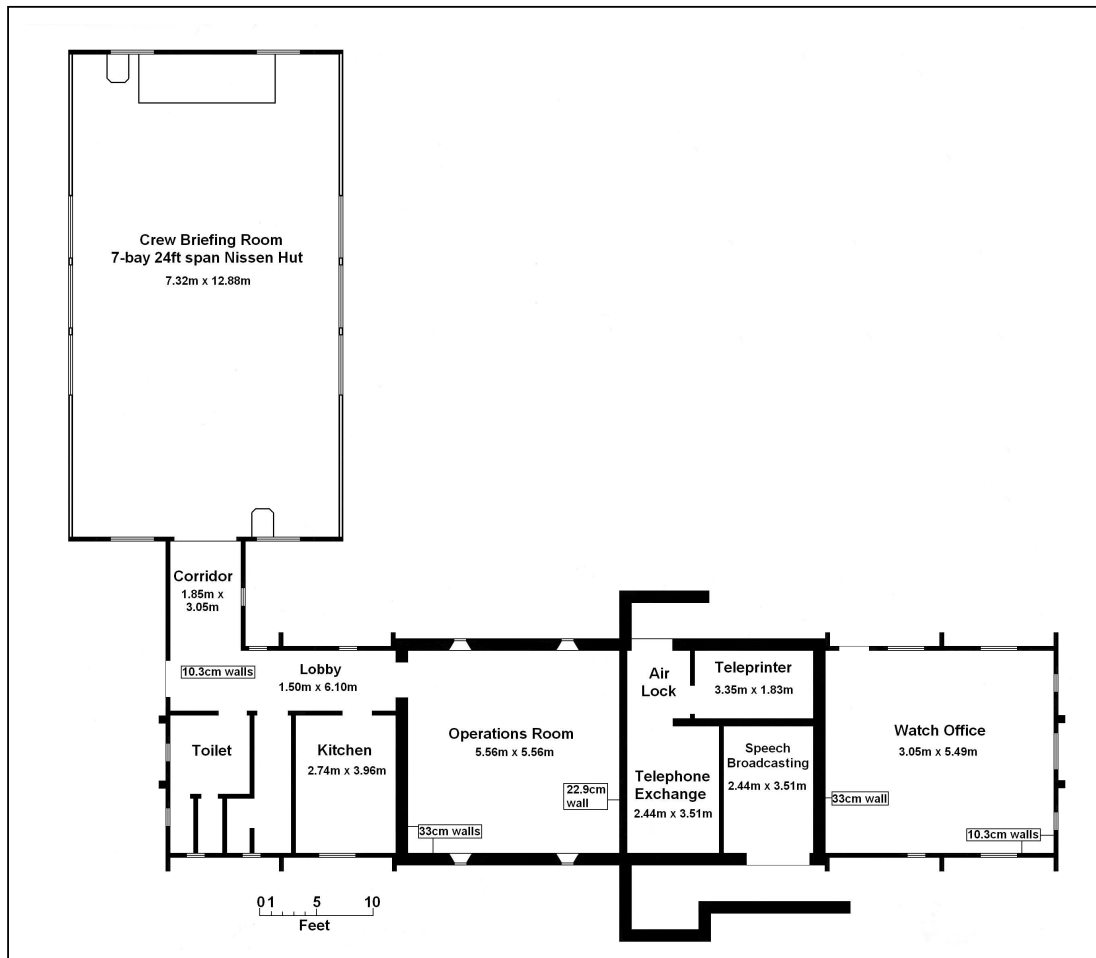


Fig. 30: Watch Office and Operations Block, Satellite Stations
13079/41, TD361 Type 'B' For Bomber Operational and OTU, Ground Floor Plan

11.9 – RAF Sector Operations Block

5291–5296/41 (465)

Operational Sector Fighter Stations

Introduction: This was a purpose-built, dispersed two-storey building, the example at Exeter being built during the early part of 1942, becoming fully operational on 2 July. It was different from other designs in that the lower floor of the operations room was below ground and the upper level of the operations room was at ground floor level. These were all built to drawings 5291–5296/41 but this sequence was superseded by 4225/42 which was similar in concept, but the whole structure was designed to be built above ground.

Architect: unknown

Construction: It was built of cement-rendered 13.5in walls, reinforced concrete beams and reinforced concrete slab upper floors and roof. The AC plant equipment and boiler rooms were located in annexes on the south-east elevation, while battery charging and GPO equipment rooms were at the opposite end.

Rooms: Access to the main area was through an air-lock.

The central area was the operations room (on two levels) and was surrounded by its associated offices, such as anti-aircraft and searchlight plotting room, meteorological office, W/T room, and teleprinter room.

Dimensions: unknown

Examples: It is thought that five sector airfields had a similar building, the other four being: Atcham, Fairwood Common, Honiley and Tiree.



Plate 27: Exeter Sector Fighter Station Operations Block, Front view



Plate 28: Exeter Sector Fighter Station Operations Block, Rear view

Photos: 1997

11.10 – Operations Block Fighter Operational Training Units

269/42, H&V 2897/42, 5819/42, H&V 6871/42 & FCW 4717

Also at Emergency Operations Room at Sector Fighter Stations

Introduction: There were never very many Fighter OTU stations, but those built had their own unique two-storey design of Operations Block. This consisted of a temporary brick ground floor, carrying a first floor Laing hut. The Emergency Operations Block for the sector fighter station at Duxford was similarly constructed, but was considerably larger.

Architect: A Bearsley.

Construction: The external ground floor walls were 9in brick which were without window openings. The first floor was a standard Laing hut with windows in the offices part only, and this was bolted to the brick ground floor.

Rooms: Ground floor – D/F Plotting, lower floor of operations room, four R/T chambers, toilets, and battery charging room.

First floor – pupils gallery, upper section of operations room, controller's rest room, H&V plant room, store, and office.

Dimensions: 18ft 6in span by 60ft (footprint of Rednal).

Examples: Rednal and Duxford



Plate 29: Rednal (Shropshire) Operations Block

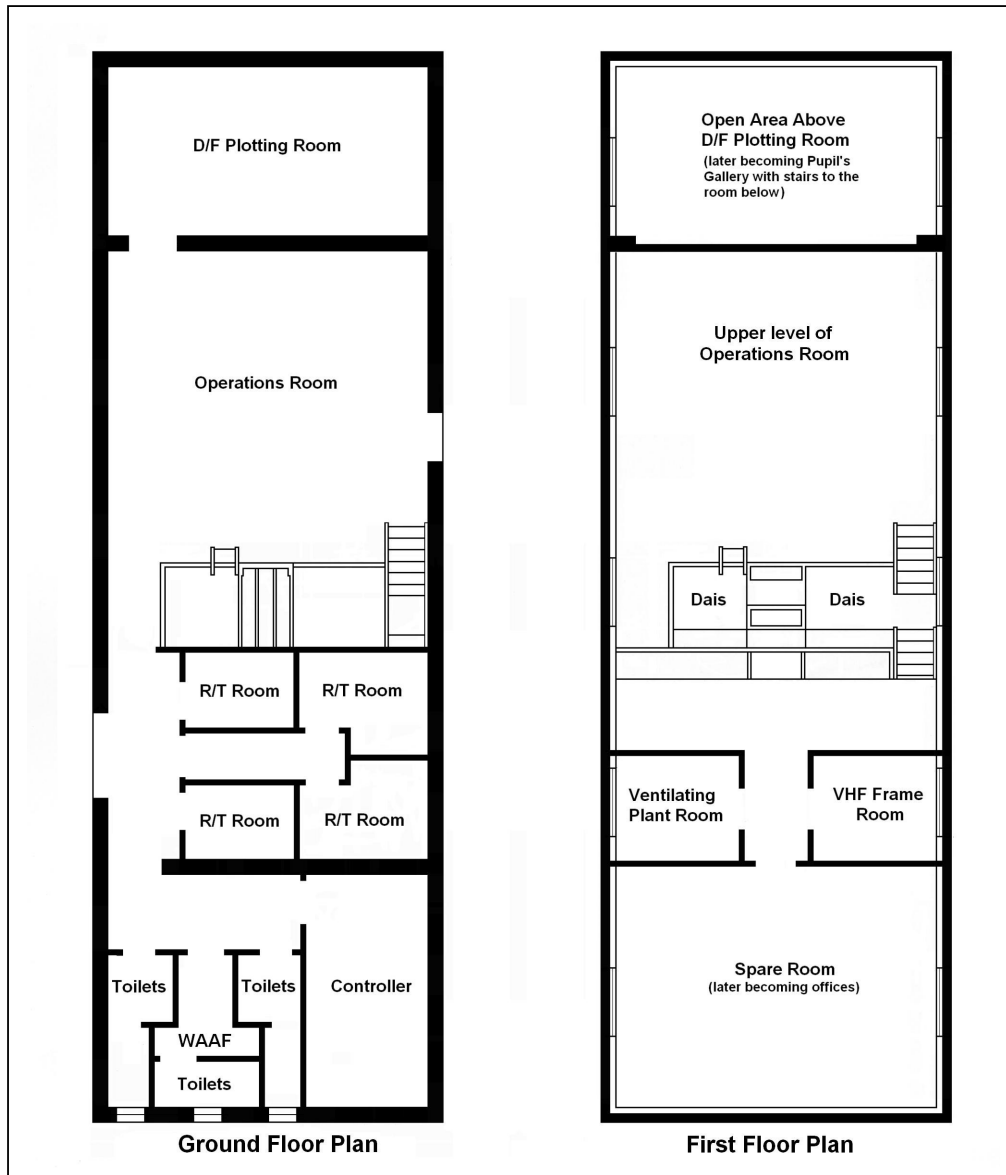


Fig. 31: Operations Block, Fighter OTU Stations

Drawing: 269/42



Plate 30: Rednal Operations Block, Operations Room



Plate 31: Rednal Operations Block, Interior View
showing Laing trusses and ventilation trunking

11.11 – Fighter Sector Operations Block

4225/42 – Operational Sector Fighter Stations

Introduction: This was the largest and the final design for a Sector Operations Block. It superseded all previous designs, but it is unknown whether any examples were ever built. The original drawing (plan) does not exist in National archives. The building was two-storey with a rectangular shape plan-form.

Architect: unknown.

Construction: Details unknown. The roof was reinforced concrete slabwork, supported by reinforced concrete beams and internal walls.

Rooms: Operations room, offices for intelligence officer, clerks, meteorological office, teleprinters, signals office. Plotting room, PBX, fuel store, pump room, boiler room, and battery charging room.

Dimensions: Floor plan unknown. Height 19ft.

Examples: unknown

11.12 – Operations Block with Annexes

4891/42 Operational Bomber Stations

Introduction: This bomber station Operations Block complex was located on the dispersed administration site. It consisted of the Operations Block with detached annexes in the form of two 30ft span Nissen huts. One functioned as a Crew Briefing Room, and the other was the Interrogation Block. There were also two temporary brick toilet blocks located close by. The detached SHQ was also located on the same site, but was a feature of another drawing.

Architect: A Bearsley

Construction: Operations Block – solid 13.5in cement-rendered brick external walls with 9in and 4.5in interior walls. The roof was reinforced concrete slab. The boiler room – a three bay 30ft span Nissen hut – was attached to an end wall.

Rooms: Operations Block – operations room, meteorological office, cipher office, traffic office, teleprinters and PBX. A two-bay, 30ft span Nissen hut built against a side-wall and this functioned as a boiler and AC plant room. The only entrance to the Operations Block was through an air lock with gas-tight doors

Crew Briefing Block – arranged open-plan.

Interrogation Block – interrogation room, airmen's rest room, kitchen, intelligence officer, signals officer, clerks, anti-aircraft operations, and WAAF rest room.

Dimensions: Operations block – 58ft 6in by 61ft, boiler house – 30ft span by 18ft (three-bays). Crew Briefing Room and Interrogation Block – 30ft span by 66ft 8in (11-bays).

Examples: Boxted, Gosfield, Great Dunmow, Little Walden, Melton Mowbray, Mepal, Metheringham, North Creak, Nuthampstead, Snitterfield, Sudbury, Stoney Cross, Wormingford, Tuddenham, Warboys, Witchford

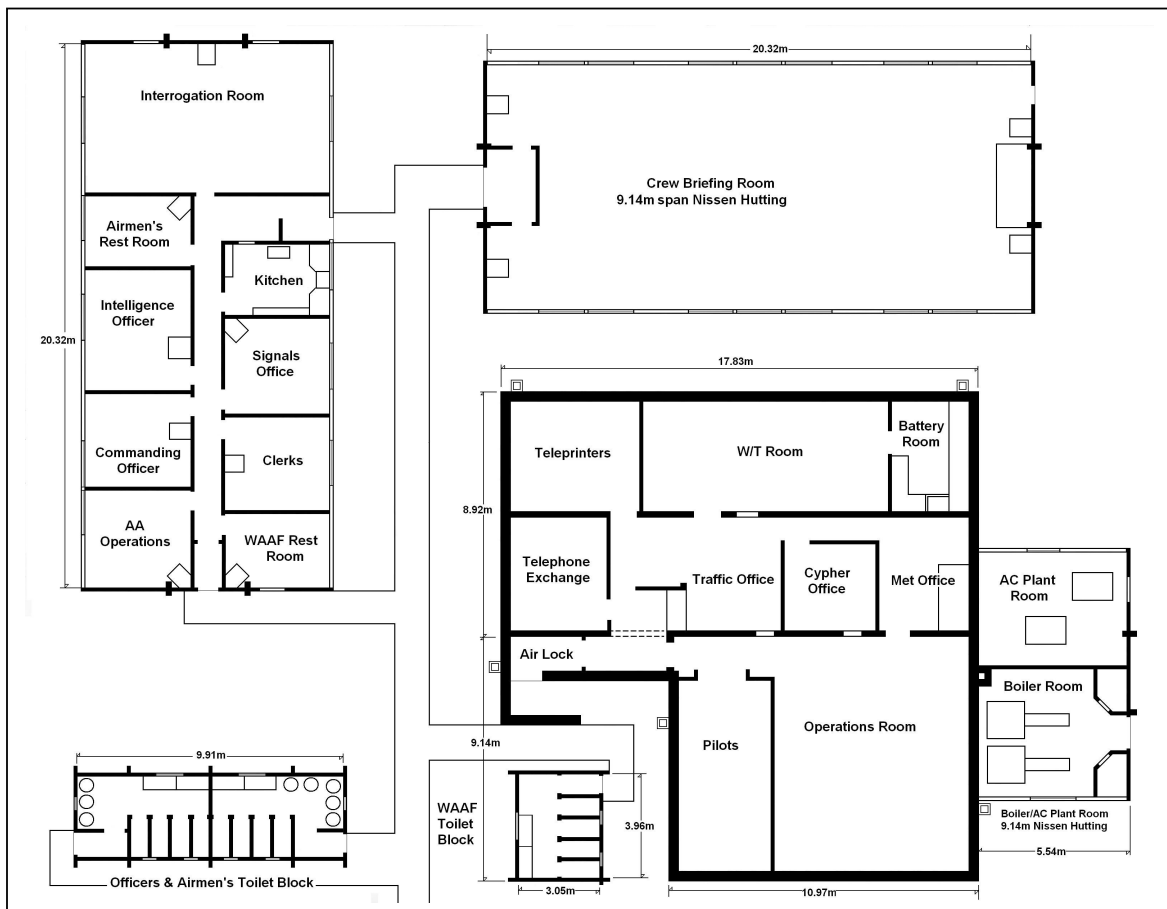


Fig. 32: Operations Block with Annexes, Bomber Stations

Type: 4891/42 – Ground Floor plan

11.13 – Final Operations Block with Annexes

228/43 Operational Bomber Stations

Introduction: Located on the dispersed administration site, design 228/43 was the last Operations Block complex design dating from WWII to be built on operational bomber stations. It consisted of the main Operations Block and two temporary brick or Nissen huts, which functioned as Crew Briefing and office annexes. Located close by was the detached SHQ, but that was a feature of another drawing.

Construction: Operations Block – external walls were cement-rendered 13.5in brick, internal walls were mainly 9in with some 4.5in brick.

Crew Briefing Room and Office annexes could either be of temporary brick construction, or erected as Nissen huts. Where temporary brick had been used, the Crew Briefing Room was an eight bay 28ft span hut while the Office Annexe was six full bays and four half bays.

Dimensions: unknown

Examples: Blakehill Farm, Bodney, Bottesford, Bungay, Chalgrove, Chilbolton, Chipping Ongar, Desborough, East Wretham, Fersfield, Gamston, Glatton, Grafton Underwood, Gransden Lodge, Graveley, Great Ashfield, Greenham Common, Grove, Harrington, Husbands Bosworth, Keevil, Kingston Bagpuize, Kimbolton, Lavenham, Little Snoring, Little Staughton, Matching, Mendlesham, Metfield, North Pickenham, Peplow, Podington, Raydon, Ramsbury, Sandtoft, Seething, Shepherds Grove, Steeple Morden, Tibenham, Wigsley, Wombleton, Upottery

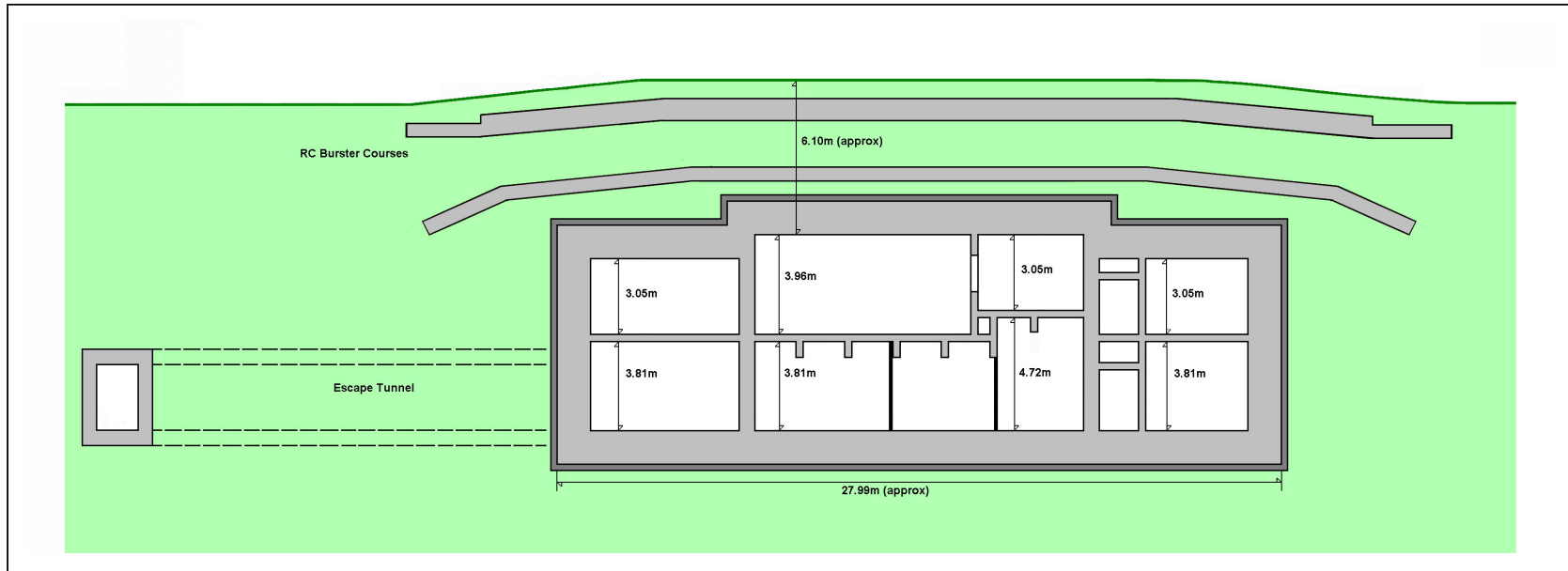


Fig. 33: Pitreavie Castle Combined Operations Block
Typical Section

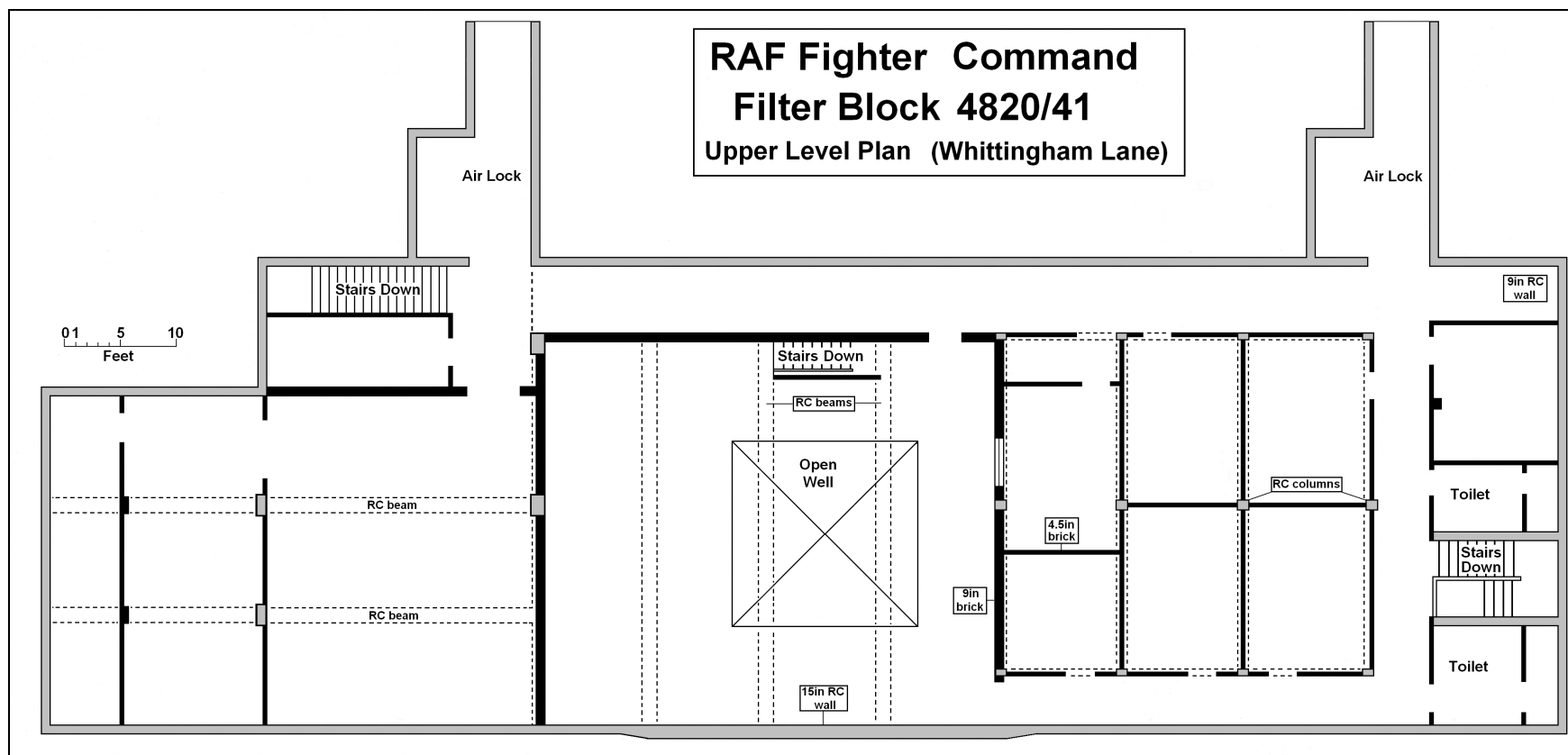


Fig. 34: Fighter Command Filter Block Whittingham Lane Upper Level

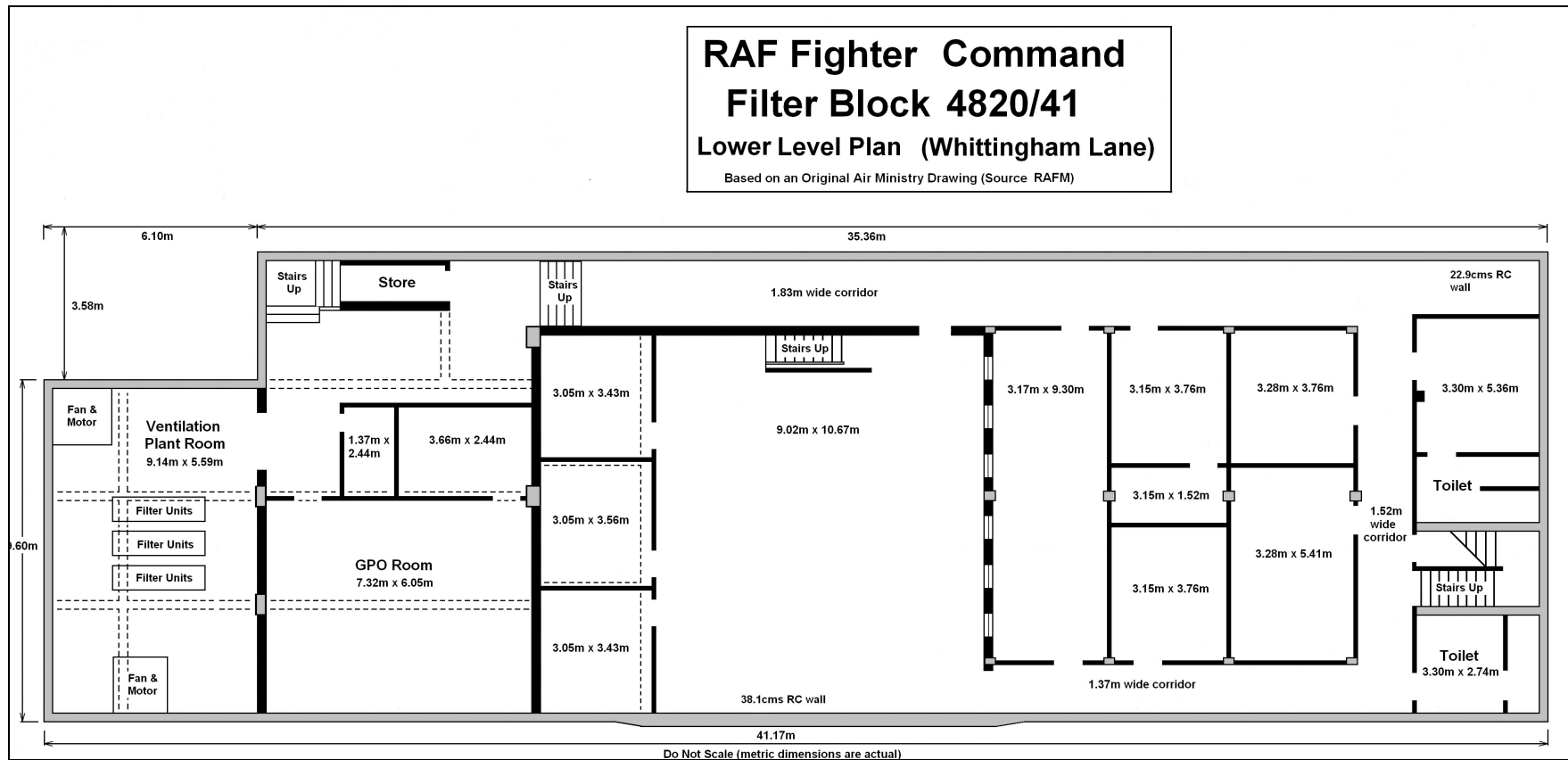


Fig. 35: Fighter Command Filter Block Whittingham Lane Lower Level

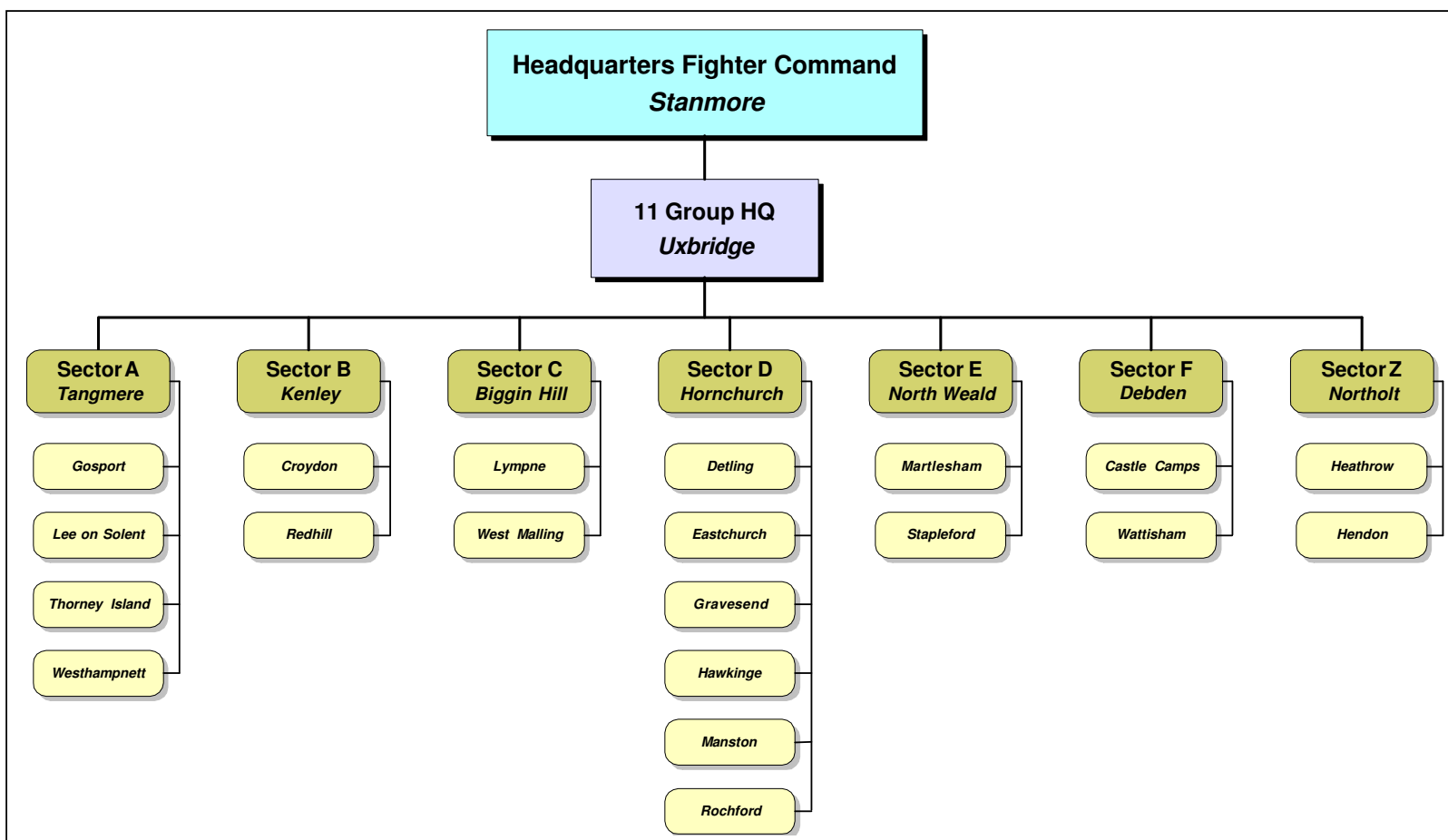


Fig. 36: 11 Group Fighter Station Organisation, August 1940

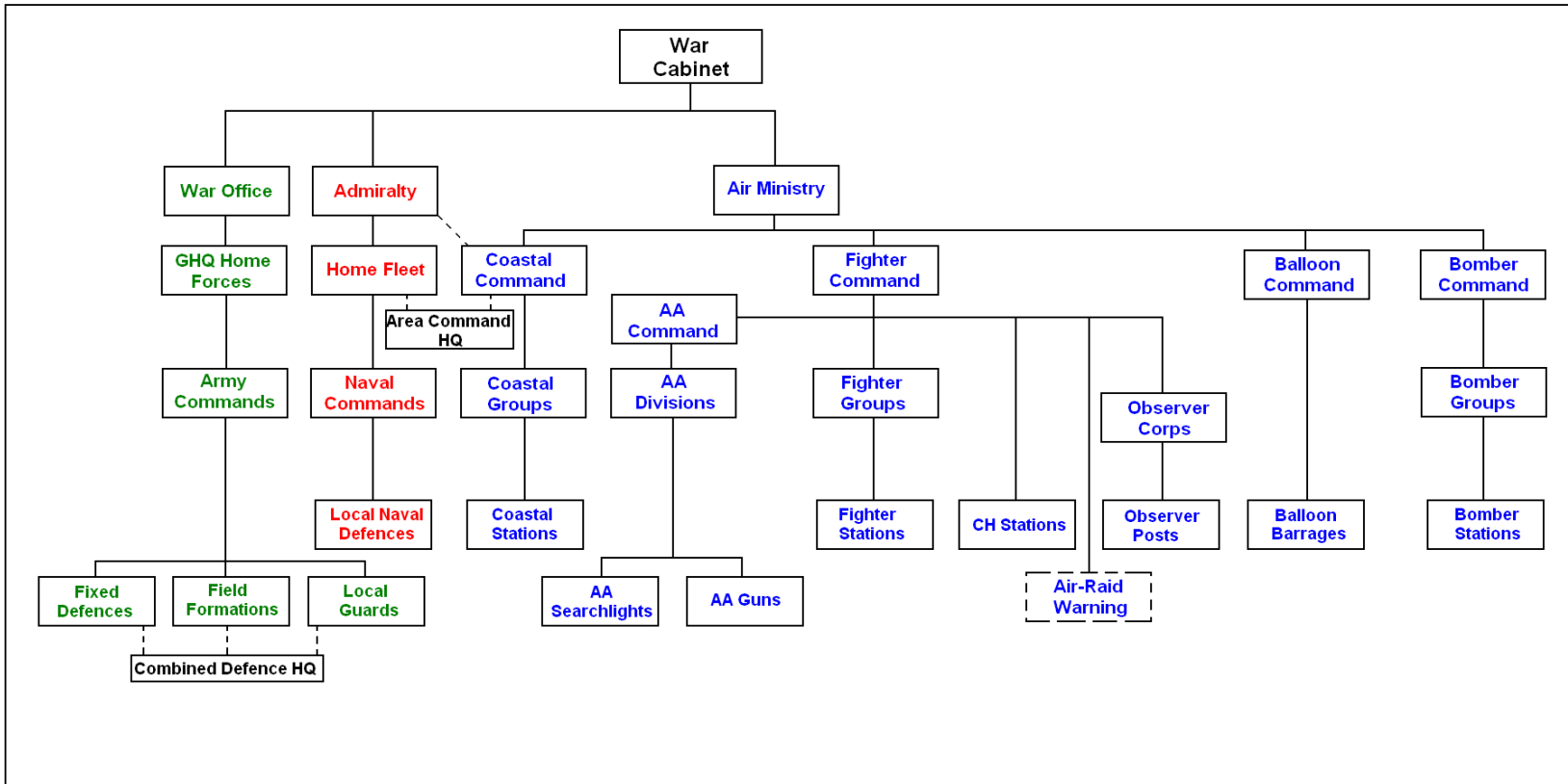


Fig. 37: The Home Defence Chain of Command, September 1939



Fig. 38: The Main Battle Area, Summer 1940

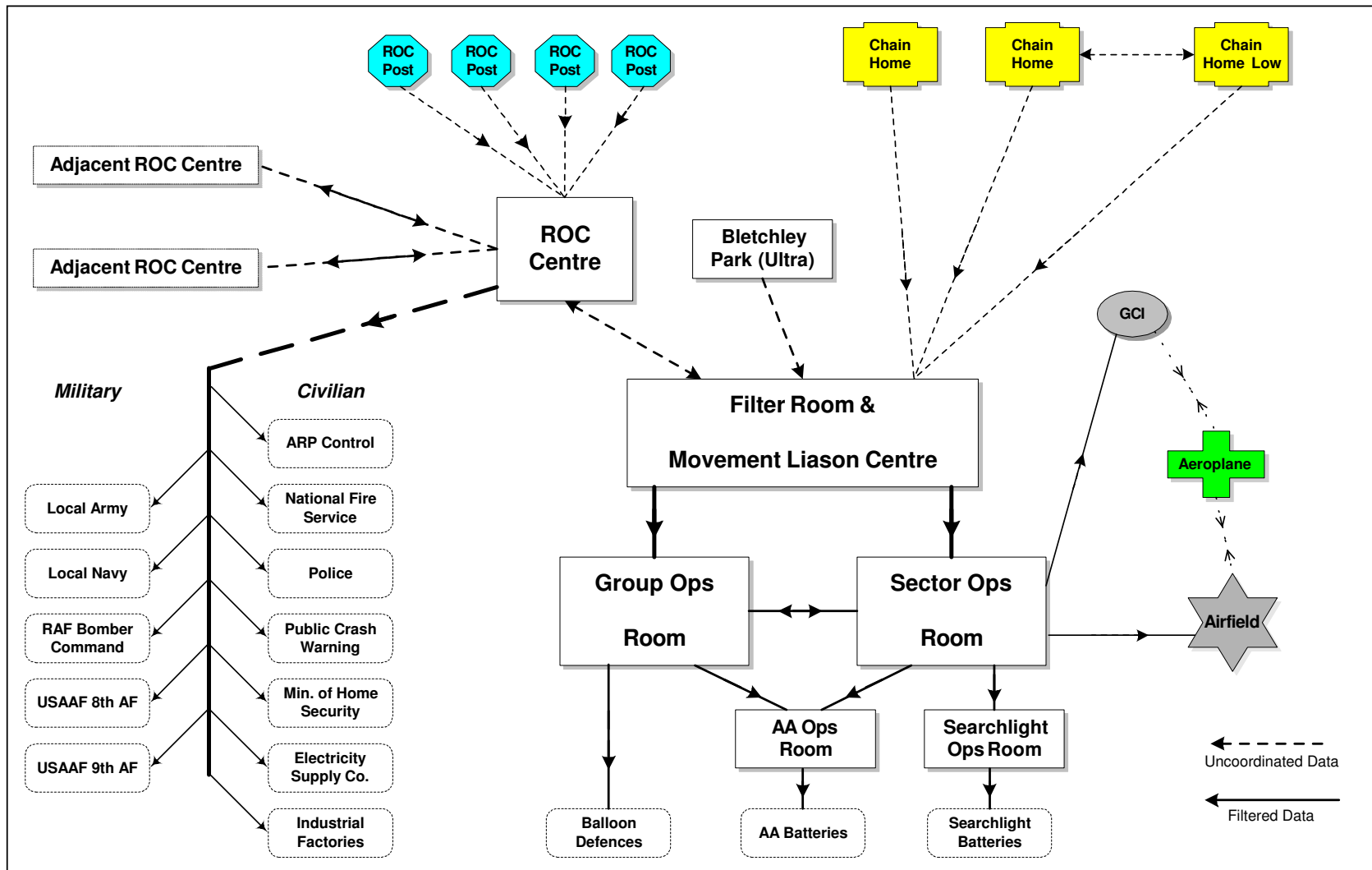


Fig. 39: Air Raid Control and Reporting Structure 1942

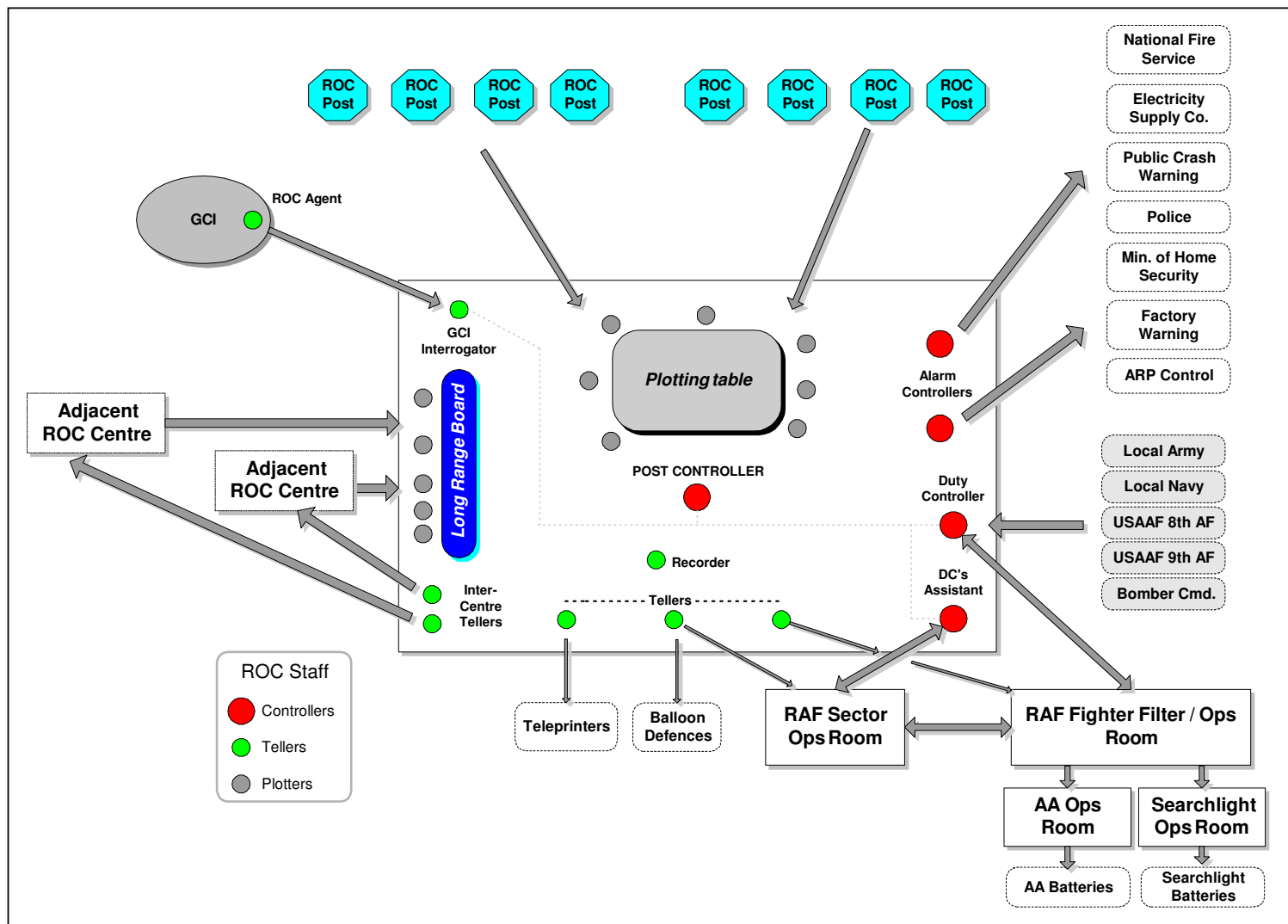


Fig. 40: Operation of a typical ROC Centre, c.1944

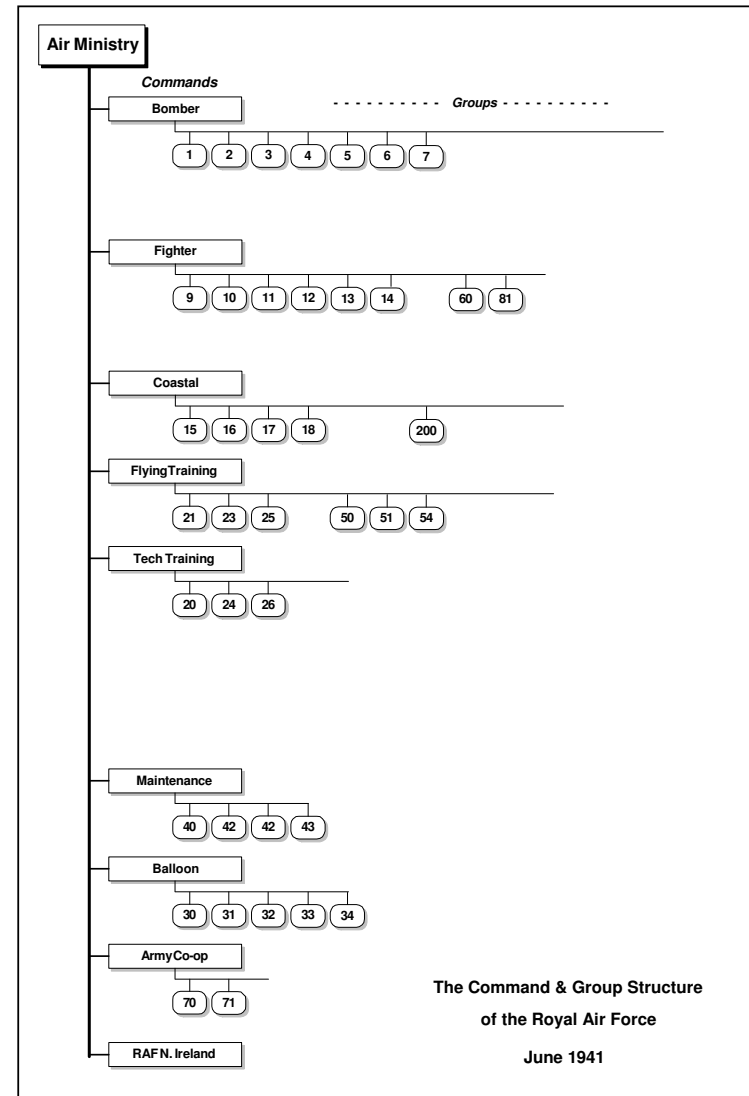
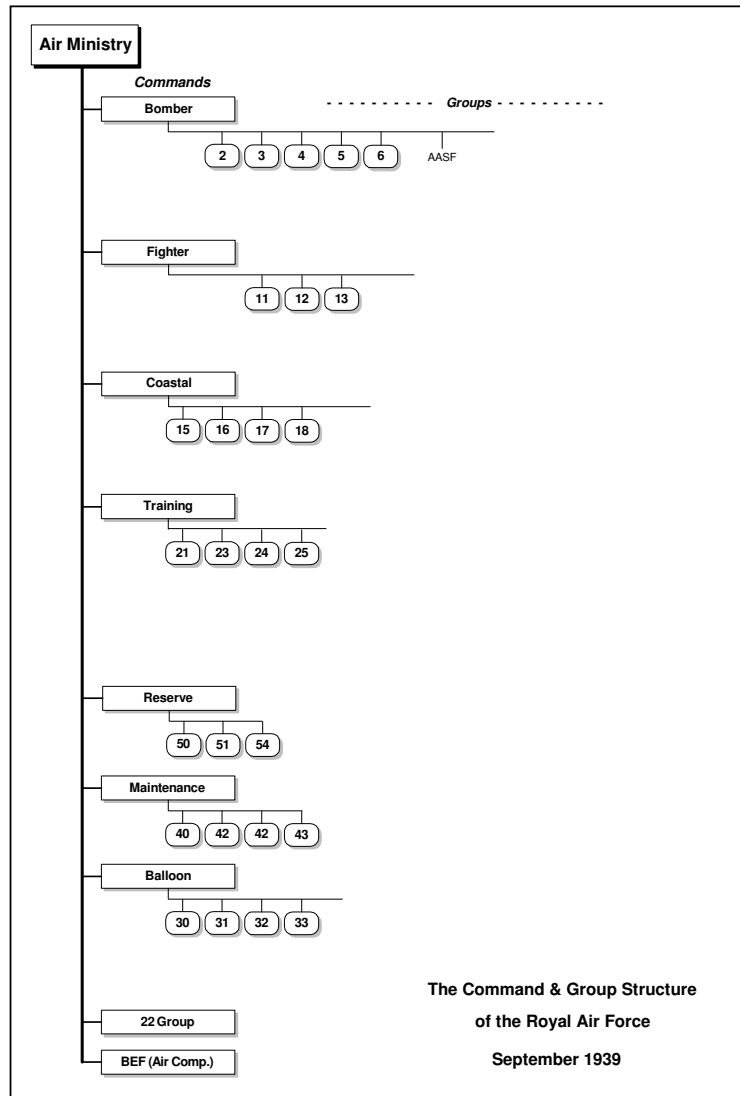


Fig. 41: RAF Command and Group Structure, 1939 and 1941

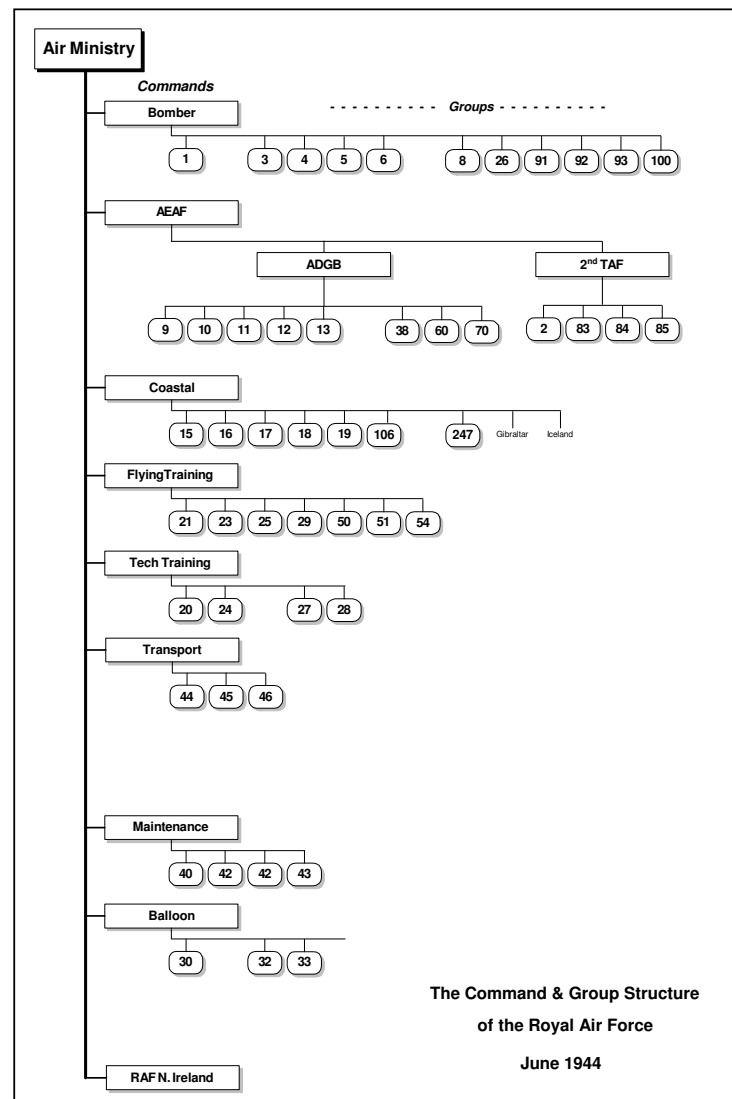
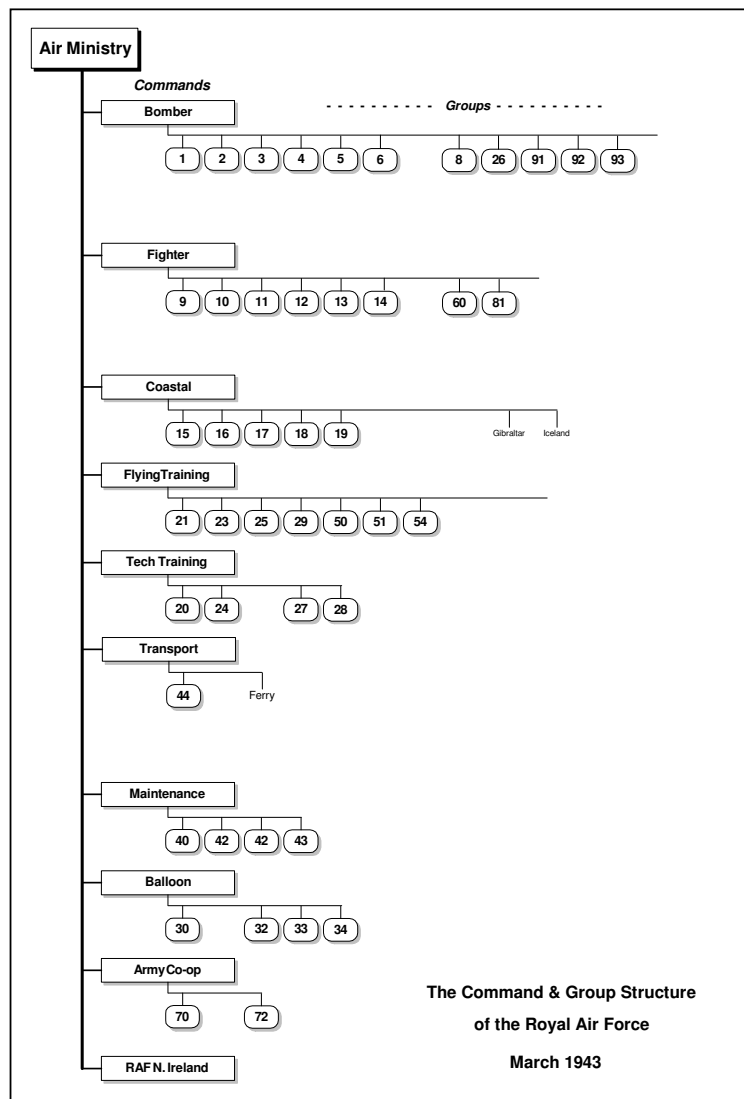


Fig. 42: RAF Command and Group Structure, 1943 and 1944

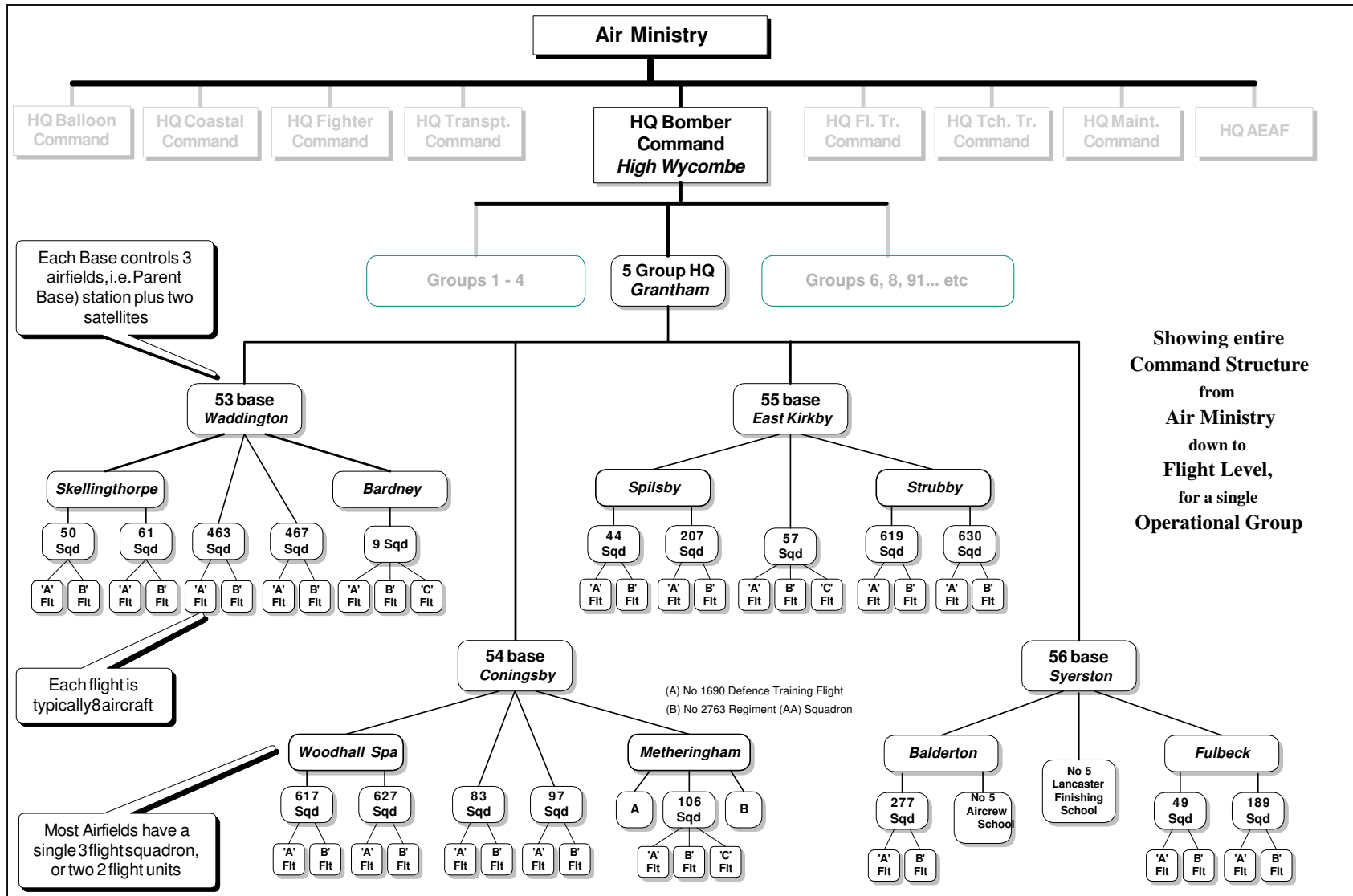


Fig. 43: Bomber Command Base Organisation, December 1944

UK MILITARY COMMAND AND CONTROL ORGANISATION.

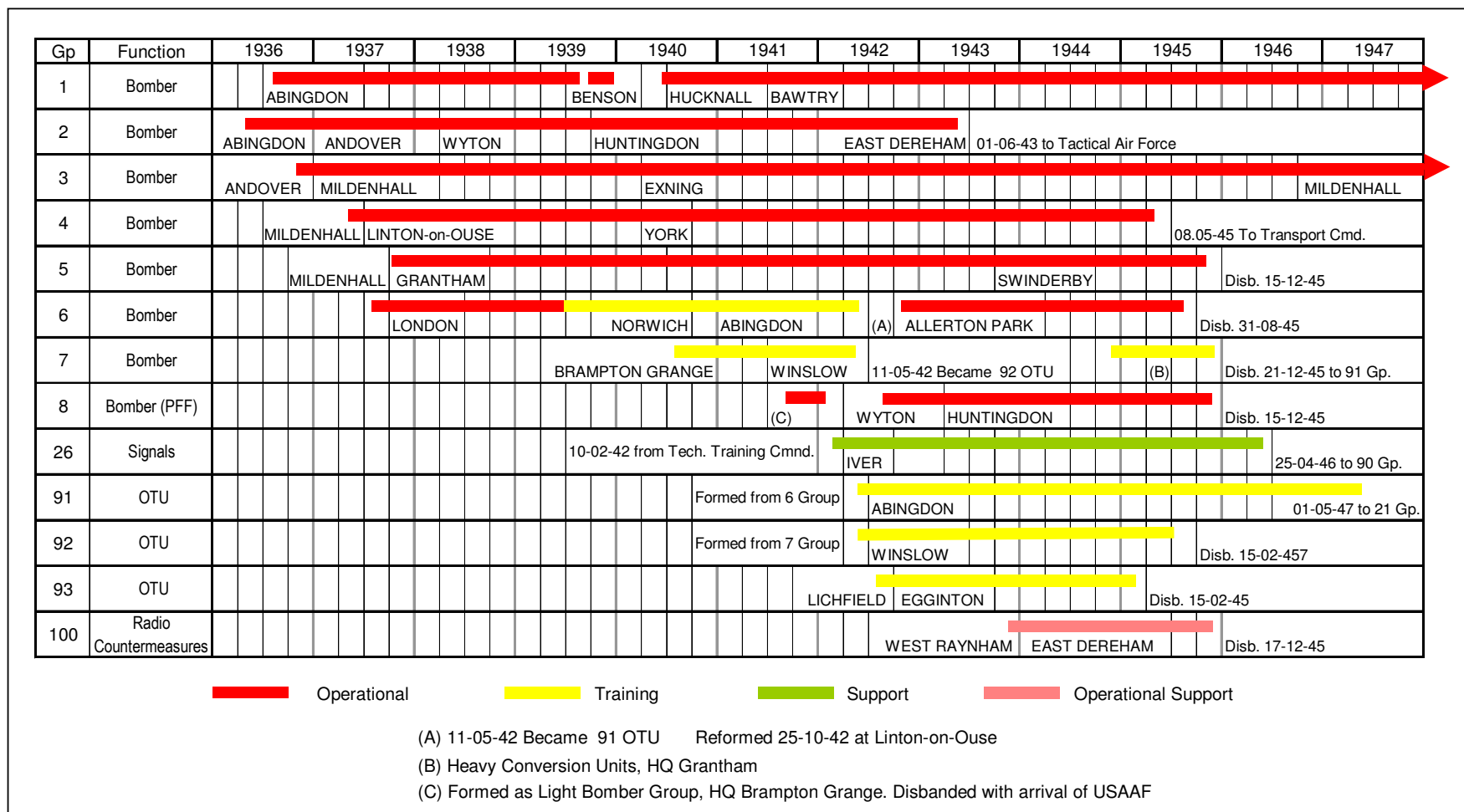


Fig. 44: Bomber Command Group Organisation, 1936–1947

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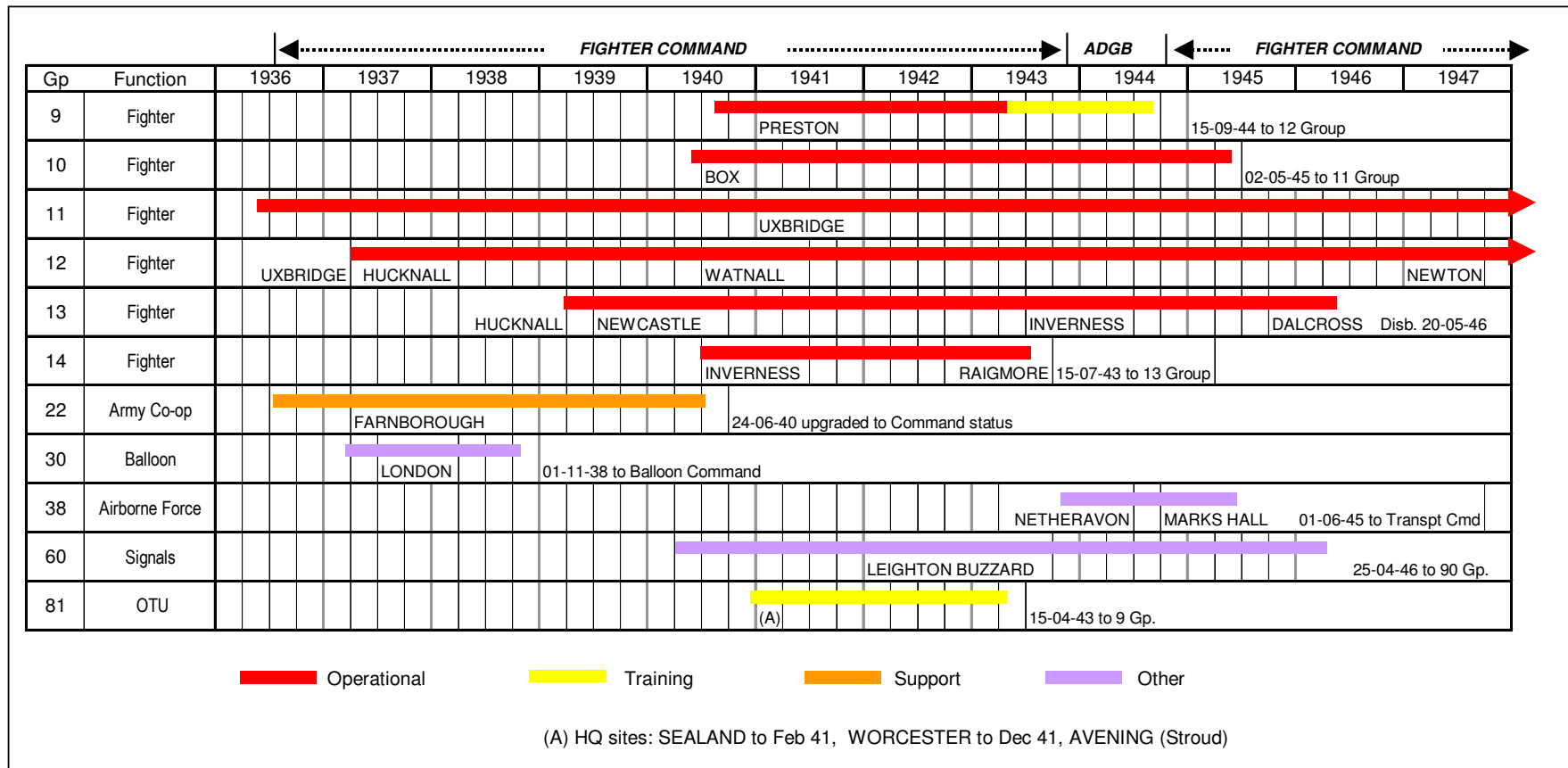


Fig. 45: RAF Fighter Command, 1936–1947
(including Air Defence of Great Britain)

UK MILITARY COMMAND AND CONTROL ORGANISATION.

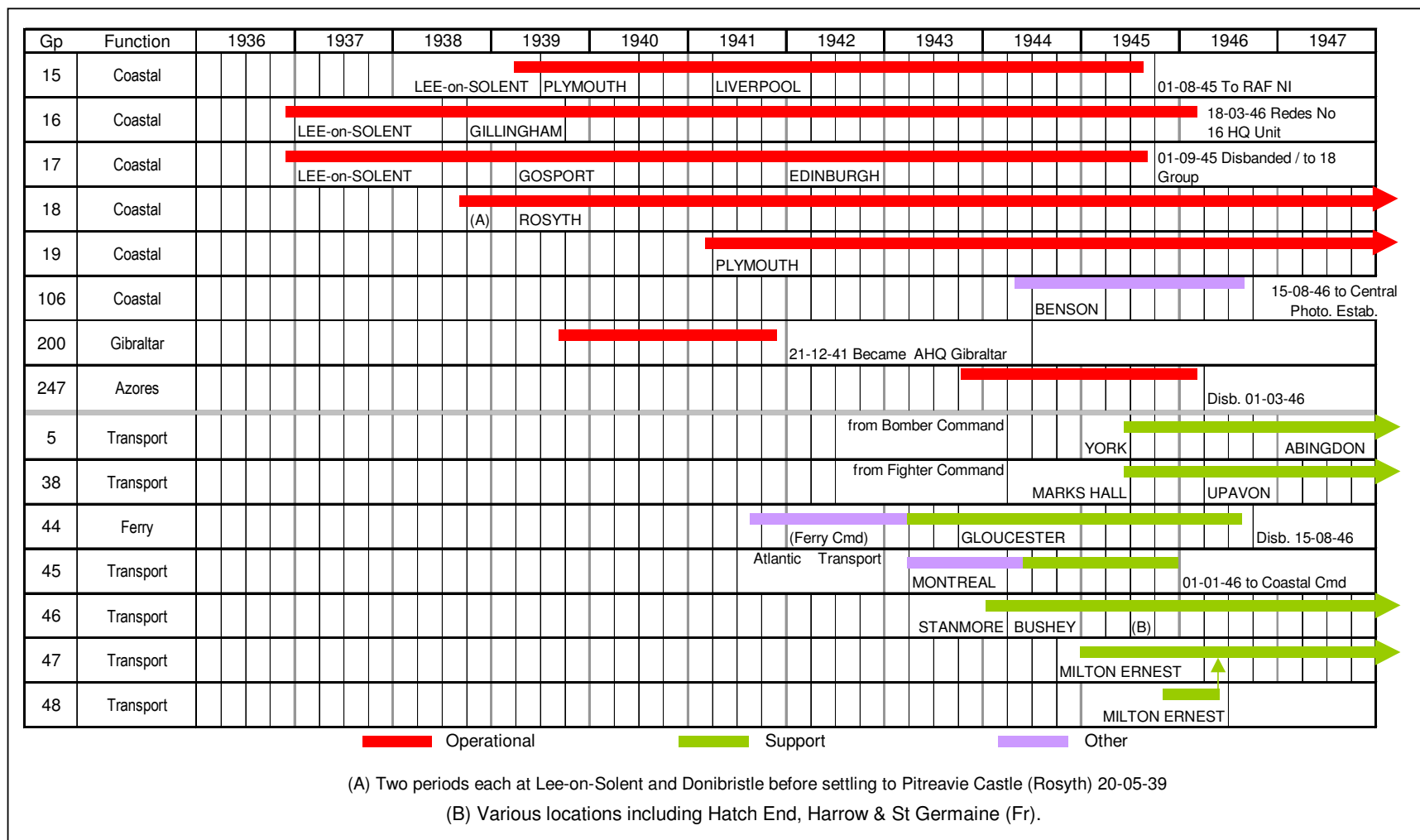


Fig. 46: RAF Coastal and Transport Commands, 1936–1947

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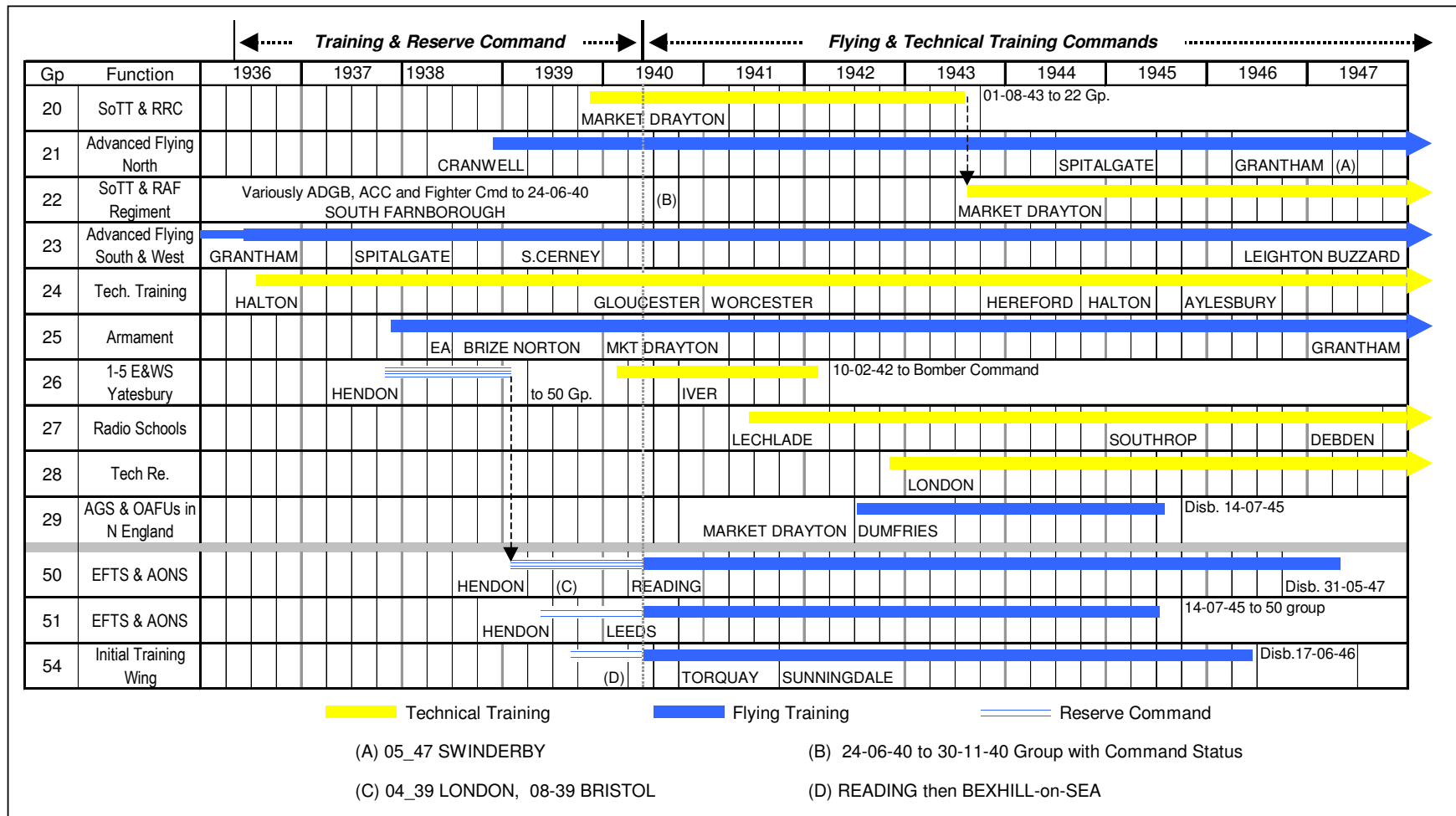


Fig. 47: RAF Training and Reserve Commands, 1936–1947

UK MILITARY COMMAND AND CONTROL ORGANISATION.

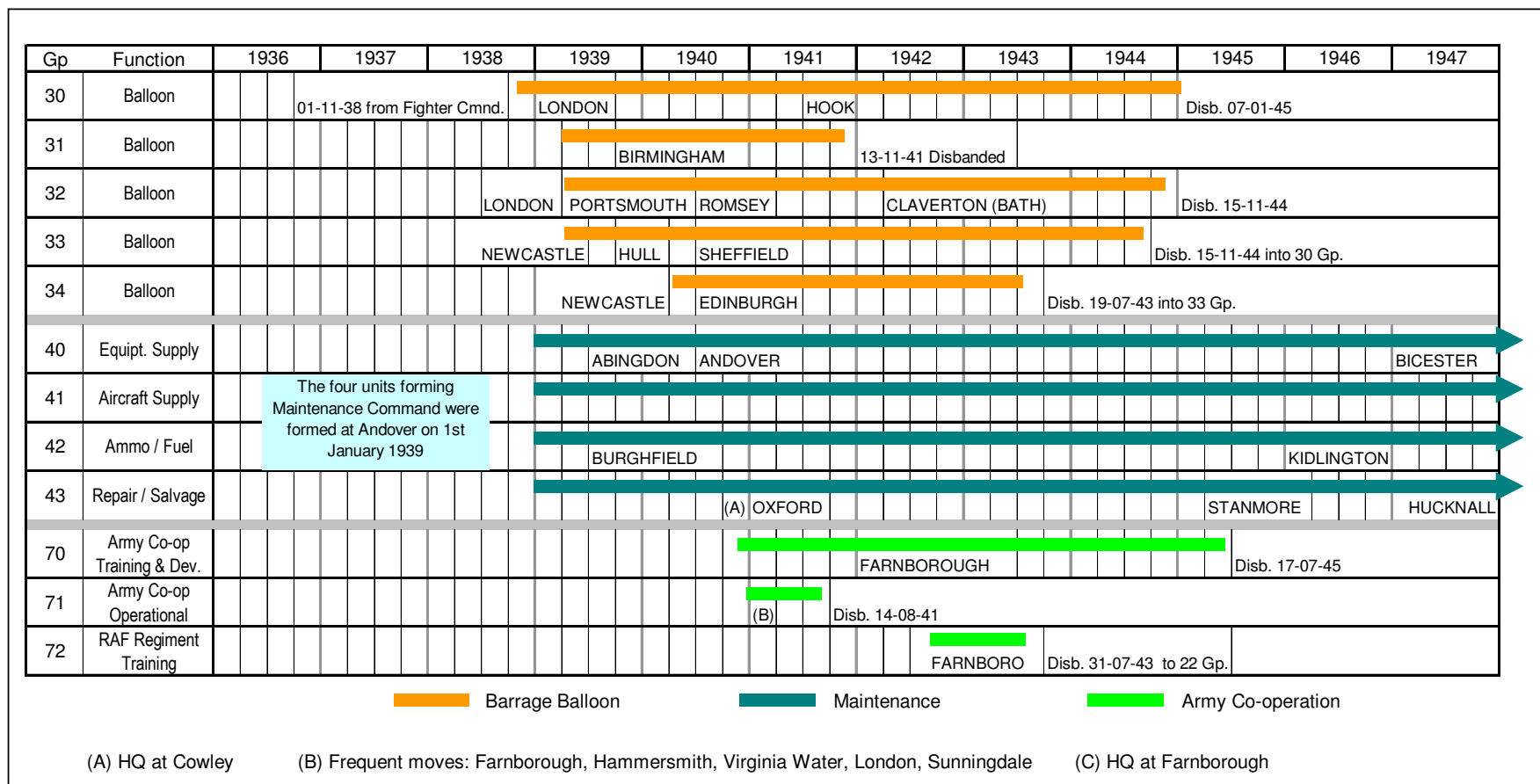


Fig. 48: RAF Balloon, Maintenance and Army Co-op Commands, 1936–1947

Table 17 – Headquarter Locations of Principal Units, 1914–2000

This table covers RFC Brigades, and RAF Commands and Groups

HQ		Location	Group	Command	Period	Notes
Abingdon		Airfield	1(Bomber) Group	Formed from Central Area, then to Bomber Command	01-05-36 – 24-08-39	redesignated as Advanced Air Striking Force
Abingdon	20-03-36	Airfield	2 (Bomber) Group	Central Area 20-03-36, Bomber Command 14-07-36, became part of TAF/2nd TAF 01-06-43	20-03-36 – 00-11-44	Moved to Brussels
Andover	26-01-37	Airfield				
Wyton	02-05-38	Airfield				
Huntingdon	00-10-39	Castle Hill House				
East Dereham	15-05-43	Bylaugh Hall				
Wallingford	16-01-44	Mongewell Park				
Abingdon		Airfield	46 (Transport) Group	Transport Command	01-11-49 – 31-03-50	Disbanded
Abingdon	11-05-42	Airfield	91 (Operational Training) Group	Bomber Command. Formed from 6 Group to control a number of Bomber Operational Training Units	11-05-42 – 31-04-47	Amalgamated with, and became 21 Group
Swinderby	14-04-47	Morton Hall				
Abingdon		Airfield	Advanced Air Striking Force	Formed from 1 (Bomber) Group to control 71 to 76 Wings)	24-08-39 – 24-06-40	Disbanded after a move to Bridgnorth
Andover	14-07-36	Airfield	3 (Bomber) Group	Formed from Western Area, to Bomber Command 14-07-36	01-05-36 – 01-11-67	Merged into 1 Group
Mildenhall	11-01-37	Airfield				
Exning	29-03-40	Harraton House				
Mildenhall	28-10-46	Airfield				
Andover	01-01-39	81 Weyhill Rd.	40 (Maintenance) Group	Maintenance Command. Estimating for, custody and distribution of all categories of equipment to home units and equipment overseas. Maintenance of reserve MT vehicles and MT allotment. Controlled the Universal Equipment Depots. Absorbed 42 Group 02-01-56	01-01-39 – 28-07-61	Disbanded
Abingdon	31-08-39	Caldicott House, Caldicott Rd				
Andover	01-06-40	Airfield				
Bicester	00-02-47	Airfield				

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (contd)						
HQ		Location	Group	Command	Period	Notes
Andover		81 Weyhill Rd.	41(Maintenance) Group	Maintenance Command. The maintenance of all aircraft reserves their allotment and delivery to home units and shipment overseas. Group HQ was responsible for the administration of the Aircraft Storage Units and the Packing Depot in the UK.	01-01-39 – 21-07-61	Disbanded and absorbed into 43 Group
Andover	01-01-39	81 Weyhill Road	42 (Maintenance) Group	Maintenance Command – Ammunition and Fuel Group – Supply of ammunition, oxygen, aviation and MT fuel and oil to all home units and shipment of oil and ammunition overseas. Controlled the Ammunition Depots, Ammunition Parks. the Reserve and Distribution Fuel Depots	01-01-39 – 02-01-56	Disbanded and merged with 40 Group
Burghfield	04-09-39	'Highwoods'				
Kidlington	18-03-46	Airfield				
Andover	01-01-39	81 Weyhill Rd.	43 (Maintenance) Group	Maintenance Command – Repair and Salvage – The repair of all types of equipment and the salvage of aircraft beyond the capacity of units to repair. Controlled the Civilian Repair Depots and the Service Repair Depots. To Ministry of Aircraft Production 00-05-40	00-01-39 – 02-01-56	Disbanded and merged with 41 Group
Cowley	16-10-40	Morris Motor Works				
Oxford	01-02-41	Magdalen College				
Stanmore	01-05-45	Old Church Lane				
Hucknall	28-06-47	Airfield				
Andover	01-09-73	Airfield	Support Command	Formed by combining Maintenance Command and 90 Group. On 13-06-77 merged with Training Command as Support Command at Brampton	01-09-73 – 01-09-94	Disbanded, maintenance tasks to Logistics Command
Brampton	13-06-77					
Andover	01-10-33	Airfields	Central Area	Controlled bomber airfields in Central England	01-10-33 – 01-05-36	Disbanded
Abingdon	16-11-33					
Andover		Airfield	Wessex Bombing Area	Formed in Inland Area controlling all bomber squadrons except 15 and 22	12-04-26 – 01-06-26	Disbanded to ADGB
Andover		Airfield	Western Area	Formed from Wessex Bombing Area	01-10-33 – 01-05-36	Redesignated as 3 (Bomber) Group
Appledram		Airfield	19 Sector	132, 134 and 144 Wings	12-05-44 – 12-07-44	Disbanded

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 <i>(contd)</i>						
HQ		Location	Group	Command	Period	Notes
Benson		Airfield	1(Bomber) Group	Bomber. Reformed	12-09-39 – 22-12-39	Disbanded
Benson		Airfield	54 (Training) Group	Training Command - formed to control Initial Training Wings	01-04-51 – 10-07-53	Disbanded
Benson		Fifield House	106 (Photographic Reconnaissance) Group	Coastal Command	14-04-44 – 15-08-46	Disbanded on creation of Central Photographic Establishment
Birmingham		unknown	13 Group	3 Area/Midland Area. Controlled 29th and 37th Wing	01-04-18 – 08-08-18	Became 13 (Training) Group
Birmingham	01-04-18	unknown	13 (Training) Group	Midland Area. Controlled 29th and 37th Wing	08-08-18 – 18-10-19	Disbanded into 3 (Training) Group
Upton	00-11-18	'Dorincourt'				
Shotwick	26-07-19	Aerodrome				
Birmingham		unknown	15 (Equipment) Group	3 Area/Midland Area formed to control Aircraft Acceptance Parks in 3 Area	01-04-18 – unknown	Fate unknown
Birmingham	01-04-18	unknown	18 Group	3 Area/Midland Area	01-04-18 – 08-08-18	Became 18 (Operations) Group
Harborough	00-06-18	near Killingholme				
Birmingham		Unknown	3 Area HQ	Controlled 12 to 14 Groups, 15 (Equipment) Group and Home Defence units	00-04-18 – 08-05-18	Became Midland Area
Birmingham		'Sandyford', Augustus Rd Edgbaston	Western Group Command	Controlled 21st, 25th, 29th and 37th Wings	26-09-17 – ?	Unknown
Birmingham	08-05-18	unknown	Midland Area	Controlled units in the geographical area of Midland Area	08-05-18 – 18-10-19	Disbanded into Northern Area
Leamington Spa	20-05-18	Somerset House, Clarendon Place Leamington Spa				
Box		Rudloe Manor	10 (Fighter) Group	Fighter. Formed for the defence of Plymouth, naval dockyards and Channel convoys	01-06-40 – 02-05-45	Disbanded to 11 Group
Bracknell		'Ramslade'	Tactical Air Force	Fighter Command's tactical air force consisting of 2, 83 and 84 Groups	01-06-43 – 15-11-43	Redesignated 2nd Tactical Air Force

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Bracknell	15-11-43	'Ramslade'	2nd Tactical Air Force	Controlled 2, 83 and 84 Groups	15-11-43 – 15-07-45	Moved to France, then Germany before being absorbed by HQ BAFO
Uxbridge	01-02-44	Hillingdon House				
Brampton	15-07-40	Brampton Grange	7 (Operational Training) Group	Bomber (OTU). Acquired 13, 14, 16 and 17 OTUs	15-07-40 – 11-05-42	Redesignated as 92 Group
Winslow	01-09-41	Winslow Hall				
Brampton		Brampton Grange	8 (Light-Day Bomber) Group	Bomber Command	01-09-41 – 28-01-42	Disbanded
Brampton		Brampton Grange	Training Command	Reformed from Flying Training and Technical Training Commands with 22, 23 and 24 Groups	01-06-68 – 13-06-77	Merged with Support Command
Brampton		Brampton Grange	Logistics Command	Controlling all Maintenance Units	01-04-94 – Extant	Extant
Calshot	01-04-18	Marine Aerodrome	10 Group	2 Area/South Western Area. Controlled 74th Wing	01-04-18 – 08-08-18	Became 10 (Operations) Group
Warsash	00-06-18	near Southampton				
Cambridge		Castle Hotel	3 Group	South Eastern Area. 26th, 35th and 39th Wings	10-05-18 – 08-08-18	Became 3 (Training) Group
Cambridge	08-08-18	Castle Hotel	3 Training Group	Midland Area/Northern Area, Inland Area 01-04-20 Controlled 26th, 35th and 39th Wings	08-08-18 – 31-08-21	Disbanded
Norwich	01-07-19	Mousehold Heath Aerodrome				
Spitalgate	10-11-19	Aerodrome				
Chailey		Radar Stn	18 Sector	131, 133 and 135 Wings	12-05-44 – 12-07-44	Disbanded
Cranwell		Aerodromes	12 Group	3 Area/Midland controlled 24th, 27th and 59th Wings	01-04-18 – 08-08-18	Became 12 (Training) Group
Cranwell		Aerodromes	12 (Training) Group	Midland Area/Northern Area with 24th, 27th and 59th Wings	08-08-18 – 01-11-19	Disbanded into 3 (Training) Group

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Cranwell	01-12-38	Airfield	21 (Training) Group	Training Command, Flying Training Command 27-05-40 to take control of the RAF College and the Service Flying Training Schools and Advanced Flying Units based in the Midlands, the north of England and Scotland. Absorbed 54 Group units 24-06-53	01-12-38 – 01-03-55	Disbanded
Spitalgate	28-07-44	Airfield				
Grantham	07-03-46	'St Vincents'				
Swinderby	01-05-47	Morton Hall				
Cranwell	12-02-40	Airfield	26 (Signals) Group	Training Command to control 1 to 5 Electrical and Wireless Schools and Special Wireless School at Yatesbury. To Technical Training Command 27-05-40 then to Bomber Command 10-02-42. From 1942 controlled ground, air and marine signals equipment, D/F and beam approach stations as well as the RAF Air Traffic Control Service	12-02-40 – 25-04-46	Disbanded into 90 Group
Iver	23-03-40	Bridge House				
Devonport		Mount Wise Barracks	9 Group	2 Area/ South Western Area	01-04-18 – 08-08-18	Became 9 (Operations) Group
Devonport		Mount Wise Barracks	9 (Operations) Group	South Western Area. From 9 Group	08-08-18 – 15-05-19	Disbanded
Dover		18 Marine Parade	5 Group	1 Area/South Eastern Area formed from the former Dover-Dunkirk Group. Controlled various units in Kent	01-04-18 – 08-08-18	Became 5 (Operations) Group
Dover		18 Marine Parade	5 (Operations) Group	Formed from 5 Group under Air Ministry and South Eastern Area	08-08-18 – 15-05-19	Disbanded
Eastchurch	01-12-37	Airfield	25 (Armament Training) Group	Training Command to Flying Training Command 27-05-40. Controlled all armament training schools	01-12-37 – 15-04-38	Disbanded
Brize Norton	28-06-39	Airfield				
Market Drayton	31-01-40	Buntingsdale Hall				
Grantham	26-04-37	'St Vincents'				
Eastchurch		Airfield	Armament Group	Controlled Armament Training Camps, Air Observer Schools as part of Training Command	01-02-34 – 01-12-37	Became 25 Group
Edinburgh		14 Randolph Crescent	20 Group	5 Area/North Western Area. Absorbed 21 Group	01-04-18 – 08-08-18	Became 20 (training) Group
Edinburgh		14 Randolph Crescent	20 (Training) Group	North Western area controlled 2, 26 and 27 Training Depot Stations and 30 Wing.	08-08-18 – 28-09-18	Disbanded into 17 Group

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (contd)						
HQ		Location	Group	Command	Period	Notes
Edinburgh	27-11-18	12 Great Stuart Street	29 (Operations) Group	Controlled ship-borne units	27-11-18 – 00-08-19	Became 29 (Fleet) Group
North Queensferry	unknown					
Edinburgh	28-05-46	4 Regents Terrace	66 (Scottish Reserve) Group	Reserve Command	28-05-46 – 01-02-57	Disbanded into 64 Group
Turnhouse	09-08-46	Airfield				
Port Edgar	22-11-54	HMS Lochinvar, Butlaw Camp				
Edinburgh		Barnton Quarry	Caledonian Sector		09-10-51 – 00-11-57	Disbanded
Exeter	15-05-46	Airfield	62 (Southern Reserve) Group	Reserve Command	15-05-46 – 01-01-57	Disbanded into 61 Group
Middle Wallop	02-07-46	Airfield				
Box	26-01-48	Rudloe Manor				
Pucklechurch	16-06-52	old Balloon Depot				
Exeter		Fighter Sector HQ	Western Sector	11 Group	16-01-45 – 15-07-46	Disbanded
Farnborough		Airfield	70 (Army Co-op Training and Development) Group	Formed out of 22 Group. To Army Co-operation Command 01-12-40	25-11-40 – 17-07-45	Disbanded
Farnborough	25-11-40	Airfield	71 (Army Co-op Operational) Group	Formed out of 22 Group To Army Co-operation Command 01-12-40. In December 1940 The unit divided: Air Staff to St Paul's School Hammersmith and Rear Staff plus Admin Staff to 'The Wolds', Wentworth Estate. On moving to London Rear HQ and Advanced HQ moved to Dormie House Golf Club, Sunningdale	25-11-40 – 14-08-41	Disbanded - squadrons then administered directly by HQ Army Co-operation Command until Wings formed 22-08-41
London	01-01-41	Storey's Gate				
Farnborough		Farnborough Court	72 (Army Co-op Training) Group	Formed to take control of the RAF Regiment Training Units. Army Co-operation Command	16-09-42 – 30-07-43	Amalgamated with 20 Group to form 22 Group 31-07-43
Farnborough		Airfield	Army Co-op Command	Controlled 70 and 71 Groups	01-12-40 – 31-05-43	Disbanded

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Ford	12-05-44	Airfields	15 Sector	125, 129 and 144 Wings	12-05-44 – 21-06-44	Moved to Martragny
Old Sarum	13-06-44					
Glasgow		Adelphi Hotel, Argyle Street	5 Area HQ	Controlled 20 to 22 Groups, 23 (Equipment) Group and Home Defence units	01-04-18 – 08-05-18	renamed North Western Area
Glasgow	08-05-18	Adelphi Hotel, Argyle Street	North Western Area	Controlled 20, 22 and 25 Groups. Absorbed North Eastern Area and took over 16 and 18 Groups	08-05-18 – 12-06-19	Became Northern Area
York	23-05-19	unknown				
Glasgow		unknown	23 (Equipment) Group	5 Area/North Western Area. Controlled Scottish Aircraft Acceptance Parks and Aircraft Repair Depots	01-04-18 – 10-05-18	
Gloucester		Eastern Avenue, Barnwood	44 (Ferry Group)	Ferry Command - formed as a result of the disbandment of Overseas Air Maintenance Control Unit. Became part of Transport Command 25-03-44	15-08-41 – 14-08-46	Disbanded
Grantham		St. Vincents	7 (Bomber) (Heavy Conversion Unit) Group	Bomber Command administered all HCU's	03-11-44 – 21-12-45	Disbanded to 91 Group
Grantham	01-05-36	St Vincents	23 (Training) Group	Training Command, controlled 1 to 9 Flying Training Schools, Central Flying School, School of Air Navigation. 48 Squadron and Packing Depot Sealand. Flying Training Command 27-05-40, took over A&AEE, CFS, glider schools, Service Flying Training Schools and Advanced Flying Units based in the Cotswold, the west and south of England. Came under Flying Training Command 01-01-57	12-04-26 – 02-05-75	Disbanded
Spitalgate	20-10-37	Airfield				
South Cerney	10-10-39	Airfield				
Leighton Buzzard	28-09-46	Oxenden House, Plantation Road				
Church Fenton	14-09-59	Airfield				
Dishforth	08-03-62	Airfield				
Linton-on-Ouse	11-07-66	Airfield				
Great Yarmouth	01-04-18	unknown	4 Group	No.1 Area/South Eastern Area	01-04-18 – 08-08-188	Became 4 (Operations) Group
Felixstowe	00-06-18	Cliff House				
Halton		Camp	24 (Training) Group	Training Command	10-07-36 – 27-05-40	Became 24 (Technical Training) Group

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Halton	27-05-40	Camp	24 (Technical Training) Group	Technical Training Command	27-05-40 – 29-12-73	Disbanded
Gloucester	03-11-40	Bell Hotel				
Worcester	19-01-41	Hindlip Hall				
Hereford	00-09-44	unknown				
Halton	00-12-44	Camp				
Aylesbury	00-12-45	Green Park. Hotel, Aston Clinton				
Spitalgate	00-03-54	Airfield				
Box	01-09-58	Rudloe Manor				
Harborough		unknown	18 (Operations) Group	Midland Area	08-08-18 – 18-10-19	Disbanded
Harrow	25-03-43	unknown	Transport Command	Controlled 44 and 45 Groups	25-03-43 – 01-08-67	Redesignated as Air Support Command
Teddington	17-04-45	Bushy Park				
Upavon	unknown	Airfield				
Hatch End	20-08-45	Dinton House Vicarage	46 (Transport) Group	Transport Command –returned from Germany. Also used 'Walders' Harrow Weald and 'Cedars' Uxbridge Road, Harrow	20-08-45 – 14-03-49	Moved to Germany for 'Berlin Air Lift'
Bushy	unknown	Bushy Hall Hotel				
Haverfordwest		St. Marys Street	14 Group	3 Area/Midland Area	01-04-18 – 08-08-18	Became 14 (operations) Group
Haverfordwest		St Marys Street	14 (operations) Group	Midland Area	08-08-18 – 19-05-19	Disbanded
Hendon	01-02-39	Airfield	50 (Training) Group	Reserve Command – formed from 26 Group controlled Elementary and Flying Training Units. To Flying Training Command 03-04-39. On reorganisation became responsible for 1, 2, 2, 3, 8, 13, 18 and 22 EFTSs and 2, 5, 6, and 11 Air Observers Navigation Schools	01-02-39 – 31-05-47	Disbanded
London	03-04-39	11 Tavistock Place				
Bristol	27-08-39	'Sambourne' The Avenue, Sneyd Park				
Reading	01-05-40	'Sylvesters' Berkeley Avenue				

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HQ		Location	Group	Command	Period	Notes
Hendon	11-05-39	Airfield	51 (Training) Group	Reserve Command –formed to take over part of 50 Group's responsibilities for E&RFTs (EFTSs). To Flying Training Command 27-05-40. Acquired 4, 5, 7, 9, 11, 12, 14, 15, 16 & 24 EFTS and 1 & 4 Air Observer Navigation Schools	11-05-39 – 14-07-45	Disbanded into 50 Group
Leeds	08-08-39	Moorfield House, Alma Road				
Hendon		The Hyde, NW9	26 (Training) Group	Training Command to control Elementary Flying Training Schools	01-12-37 – 30-01-39	Became 50 Group in Reserve Command
Hendon and Reading		Airfield and Wantage Hall Reading University	Reserve Command	Controlled 50, 51 and 54 Groups	01-02-39 – 27-05-40	Disbanded into Flying Training Command
High Wycombe		Walters Ash	38 Group	Strike Command formed to take over responsibilities from 1 Group for air transport and air-to-air refuelling resources	01-11-92 – Current	Current
High Wycombe		Walters Ash	Air Warfare Centre	Strike Command	01-07-93 – extant	Extant
Hucknall	24-06-40	Airfield	1 (Bomber) Group	Reformed at Hucknall. On 01-11-67 acquired 3 Group, became 1 (Bomber Group) in Strike Command. On 01-09-72 became 1 Group. Absorbed 38 Group while at Upavon	24-06-40 – Extant	
Bawtry Hall	20-07-41	Bawtry Hall				
Upavon	17-11-83	Airfield				
Benson	30-07-93	Airfield				
High Wycombe	1996					
Hucknall	15-03-39	Airfield	13 (Fighter) Group	Fighter Command, for defence of Northern England and Scotland	15-03-39 – 20-05-46	Disbanded
Newcastle	24-07-39	Kenton Bar				
Newcastle	05-09-39	Blakelaw Estate Ponteland Road				
Inverness	16-07-43	Drumossie Hotel				
Dalcross	05-12-45	unknown				
Hurn		Airfield	22 Sector	(121, 124 and 143 Wings)	12-05-44 – 13-06-44	Moved to France

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Inverness	29-06-40	Drumossie Hotel	14 (Fighter) Group	Fighter Command	29-06-40 – 12-07-43	Disbanded into 13 Group
Raigmore	01-03-43	unknown				
Kenley		Airfield	6 (Fighter) Group	Reformed from 1 Group	01-05-24 – 20-05-26	Disbanded into Fighting Area
Kenley		Airfield	61 (Southern Reserve) Group	Formally 61 (Eastern Reserve) Group Reserve Command. Absorbed 62 Group	01-01-57 – 31-03-59	Disbanded
Kenley	20-05-26	Airfield	Fighting Area	Formed from 6 Group to control fighter squadrons within Inland Area until 01-06-26 when control transferred to ADGB	20-05-26 – 01-05-36	Became 11 Group
Uxbridge	07-07-26	Hillingdon House				
Kenley		Airfield	17 Sector	122, 126 and 127 Wings	12-05-44 – 13-06-44	Moved to France
Kidbrooke		SE3	1 Group	Inland	19-05-24 – 24-04-26	Replaced by 21 Group
Lechlade	26-05-41	Unknown	27 (Signals Training) Group	Training Command to control Radio Schools	26-05-41 – 01-10-58	Disbanded
Southrop	22-01-45	Airfield				
Debden	18-09-47	Airfield				
Colerne	15-09-49	Airfield				
Yatesbury	20-07-53	Airfield				
Lee on Solent	01-05-36	Airfield	Coastal Command	Formed from Coastal Area to control all UK-based GR Groups	01-05-36 – 27-11-69	Redesignated 18 Group 28-11-69
Northwood	08-08-39	Eastbury Park				
Leeds		Castle Grove, Headingley	24 Group	6th Brigade to control 46th and 48th Wings	22-06-18 – 08-08-18	Became 24 Northern) (Operations) Group
Leeds	08-08-18	Castle Grove Headingley	24 Northern) (Operations) Group	6th Brigade to control 46th and 48th Wings	08-08-18 – 13-06-19	Disbanded
Leeds	Unknown	Moor House				
Tadcaster	24-05-19	Aerodrome				

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HQ		Location	Group	Command	Period	Notes
Lee-on-Solent	15-03-39	Airfield	15 (General Reconnaissance) Group	Coastal Command. Transferred from Plymouth to north-west to be close to the newly-formed Western Naval Command	15-03-39 – 09-04-41	Acquired all RAF units in Iceland
Plymouth	07-06-39	Mount Wise Barracks				
Plymouth	16-08-40	Eggbuckland Keep				
Liverpool	28-02-41	Derby House, Exchange Buildings				
Lee-on-Solent	01-12-36	Wykeham Hall	16 (Reconnaissance) Group	Coastal Command	01-12-36 – 08-03-46	Redesignated as 16 HQ (Unit), 16 Wing Chatham
Chatham	26-09-38	unknown				
Lee-on-Solent	08-10-38	Airfield				
Gillingham	08-11-38	Black Lion Fields				
Lee-on-Solent	01-12-36	Wykeham Hall	17 (Training) Group	Coastal Command	01-12-36 – 01-09-45	Disbanded
Gosport	24-02-39	Fort Grange				
Edinburgh	05-02-42	Mackenzie Hotel 58, Melville St.				
Lee-on-Solent	01-09-38	Airfield	18 (Reconnaissance) Group 18 (General Reconnaissance) Group	Coastal Command	01-09-38 – 28-11-69	Became HQ Northern Maritime Air Region
Donibristle	27-09-38	Airfield				
Lee-on-Solent	11-10-38	Airfield				
Donibristle	21-10-38	Airfield				
Rosyth	20-05-39	Naval Dockyard				
Leighton Buzzard		Oxenden House, Plantation Rd.	60 (Signals) Group	Fighter Command - formed to control Air Ministry Experimental Stations. Took over control of the RDF Chain	23-03-40 – 25-04-46	Disbanded into 90 Group
Lichfield	15-06-42	Airfield	93 (Operational Training) Group	Bomber Command, formed to control a number of Bomber Operational Training Units	15-06-42 – 14-02-45	Disbanded
Egginton	07-07-42	Egginton Hall, Derby				

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Linton on Ouse	25-10-42	Airfield	6 (Bomber) Group (RCAF)	Bomber Command	25-10-42 – 31-08-45	Disbanded
Knaresborough	01-12-42	Allerton Park				
London	01-04-18	11-12, Dover Street, Piccadilly, W1	1 Group 1 (Training) Group	Formed in 1 Area, became 1 (Training) Group, then to Southern Area on 20-09-19 and finally to Inland Area on 01-04-20. Controlled 6th, 18th, 56th and 58th Wings	01-04-18 – 18-05-24	Renamed 6 Group 19-05-24
London	10-06-19	4 Thurloe Place, S Kensington, SW7				
Croydon	29-08-19	Plough Lane				
Kenley	00-12-19	Airfield				
London	25-08-27	145 Sloane St., SW1	1 (Air Defence) Group	ADGB controlled cadre and auxiliary squadrons	25-08-27 – 01-05-36	Redesignated 6 Group
London	23-03-32	33-34 Tavistock Place, WC1				
London		unknown	6 (Equipment) Group	South Eastern Area to control Aircraft Acceptance Parks and Aircraft Repair Depots	01-04-18 – unknown	Became Technical Group
London		33-34 Tavistock Place, WC1	6 (Auxiliary) Group	Formed by redesignating 1 (Air Defence) Group	01-05-36 – 01-01-39	Became 6 (Bomber) Group
London	01-05-36	33-34 Tavistock Place, WC1	6 (Bomber) Group	Bomber Command	01-05-36 – 11-05-42	Redesignated as 91 Group
London	01-11-42	17-19 Queens Square, WC2	28 (Technical Training)	Technical Training Command. Took over the function of 20 and 24 Groups	01-11-42 – 06-03-50	Disbanded
Uxbridge	24-02-49	Hillingdon House?				
Norwich	03-04-39	North Walsham Road Old Catton				
Abingdon	00-04-40	Airfield				
London	29-08-18	Room 230, Air Ministry	27 (Operations) Group	Independent Air Force to operate V/1500 bombers from East Anglia against Berlin	29-08-18 – 19-05-19	Disbanded
Bircham Newton	Unknown	Unknown				
London	17-03-37	33-34 Tavistock Place, WC1	30 (Barrage Balloon) Group	Fighter Command to Balloon Command 01-11-38	17-03-37 – 07-01-45	Disbanded
London	08-10-37	Kelvin House, Cleveland House				
Hook	00-08-41	Balloon Depot				

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HQ		Location	Group	Command	Period	Notes
London	17-03-37	Kelvin House, Cleveland St.	31 (Barrage Balloon) Group	Balloon Command	17-03-37 – 13-11-41	Disbanded
Birmingham	01-05-39	176 Broad Street				
Birmingham	00-04-41	Forhill House, King's Norton				
London	01-03-39	Kelvin House, Cleveland St	32 (Barrage Balloon) Group	Balloon Command	01-03-39 – 15-11-44	Disbanded
Portsmouth	15-05-39	Commercial Chambers 1-13 Commercial Road				
Romsey	23-06-40	Harefield House, Winchester Road				
Claverton	10-11-41	Claverton Manor				
London	02-05-46	St. Regis Hotel, Cork St., W1	65 (London Reserve) Group	Reserve Command. Dropped 'Reserve' from title 01-08-50	02-05-46 – 01-02-51	Disbanded into 61 Group
Hendon	22-08-46	Airfield?				
London		145 Sloane St., SW1	Special Reserve and Auxiliary Air Force	Formed from HQ Superintendent RAF Reserve to control cadre and auxiliary squadrons	14-05-25 – 18-07-27	Redesignated Air Defence Group
London		4 Thurloe Place South Kensington SW7	Coastal Area	10 and 29 Groups. Coastal Area controlled all air units working with the Royal Navy in Home waters	15-09-19 – 01-05-36	Redesignated Coastal Command
London		Russell Court Hotel, Tavistock Square				
Lee-on-Solent	18-01-32	Airfield				
London		Carlton Terrace House, SW1	Air Board		00-05-16 – 00-01-18	Redesignated as Air Ministry
London		Hotel Cecil, Victoria Embankment, WC2				
London	1918?	Hotel Cecil, Victoria Embankment, WC2	Air Ministry	Also occupied offices in Alexandra House, Pen Corner, Ariel House, Audrey House, Bush House, Clement's Inn, Imperial House, Ingersoll House, Melbourne House, Princess' House, Savoy Hill House, Victory House and York House. After September 1939 all of these were centralised at Berkeley Square House	00-01-18 – unknown	(now Shell Mex House)
London	1918?	Adastral House, Kingsway, Holborn, WC2				
London	unknown	Whitehall Gardens, SW1				

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 <i>(contd)</i>						
HQ		Location	Group	Command	Period	Notes
London		Berkeley Square House	Air Ministry	Designed by Gordon Jeeves and Hector O Hamilton	00-09-39 – unknown	unknown
London		Hotel Cecil, Victoria Embankment, WC2	Home Defence Group	Formed from Home Defence Wing	00-03-17 – 14-08-17	Became Home Defence Brigade 15-08-17
London	01-11-38	Kelvin House, Cleveland St	Balloon Command	Formed to control all UK-based balloon units	01-11-38 – 15-06-45	Disbanded and replaced by Balloon Wing
Stanmore	01-09-39	Manor House, Station Road				
London		Spring Gardens, SW1	London Air Defence Area		00-05-16	
London		Covent Garden Hotel	1 Area HQ	Controlled 1 to 5 Groups, 6 (Equipment) Group and Home Defence units	01-04-18 – 08-05-18	renamed South-Eastern Area
London		145b Sloane Street	Air Defence Group	Controlled Cadre and Auxiliary Squadrons	18-07-27 – 25-08-27	Redesignated No.1 (Air Defence) Group
London		Air Ministry	Air Defences of Great Britain		01-01-25 – 31-05-26	Redesignated as Air Defence of Great Britain when it moved to Hillingdon House
London		13 Albemarle Street, Piccadilly	2nd Brigade	Home Defence	23-10-15 – 14-01-16	Redesignated as 6th Brigade
London		13 Albemarle Street, Piccadilly	6th Brigade	Home Defence	15-01-16 – 20-07-16	Redesignated Training Brigade
London	12-10-17	Unknown	6th (Home Defence) Brigade	Controlled 37, 39, 43, 50, 51, 61, 75, and 141 Squadrons	12-10-17 – 01-06-18	Became too large, divided into Northern and Southern Groups. Redesignated as Home Defence Wing 30-06-19
London	20-10-17	Horse Guards Parade Whitehall				
London		Holborn Viaduct Hotel	Eastern Group Command	Controlled 6th, 7th and 18th Wings	01-01-17 – 05-08-17	Became Eastern Training Brigade
London		Holborn Viaduct Hotel	Eastern Training Brigade	Controlled 23rd, 24th and 27th Wings	05-08-17 – unknown	Disbanded
London		West Africa House, Kingsway	Experimental Group	Controlled all RAF experimental establishments	16-08-18 – 01-01-19	Disbanded

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 <i>(contd)</i>						
HQ		Location	Group	Command	Period	Notes
London		Horse Guards Annexe, Carlton Terrace	Headquarters London District	Unknown also known as London Air Defence Area	24-12-17 – ?	Unknown fate
London	01-04-38	Air Ministry, Kingsway	Maintenance Command	Controlled all UK-based Maintenance Units	01-04-38 – 30-08-73	Merged into Support Command
RAF Andover	07-08-38	Andover airfield				
Andover	15-09-39	Amport House St Mary's				
RAF Andover	18-07-61	Andover Airfield				
London	07-01-46	Alexandra House and Imperial House	Reserve Command		07-01-46 – 01-08-50	Redesignated Home Command
London	30-05-46	Adastral House				
White Waltham	07-10-46	Airfield				
London	08-05-18	Covent Garden Hotel	South Eastern Area	Formed from No.1 Area controlled 1, 2., 4 and 10 Groups	08-05-18 – 20-09-19	Disbanded into Southern Area
London	14-04-19	4 Thurloe Place, South Kensington				
Uxbridge	13-09-19	Hillingdon House				
London		unknown	Southern Group	Controlled 47th, 49th, 50th and 53rd Wings	01-06-18 – unknown	Became 6th Brigade?
London	00-11-19	Covent Garden Hotel	Technical Group	Controlled 2, 7, 8 and 10 Aircraft Acceptance Parks	00-11-18 – unknown	Unknown
London	(00-04-19)	14 Southampton Street				
London	(14-04-19)	4 Thurloe Place				
Luce Bay		Marine Aerodrome	25 (Operations) Group	North Western Area with 258 Squadron and airship stations at Luce Bay and Larne. Under the direct control of SNO Larne	12-08-18 – 1920	Disbanded
Manby	15-03-51	Airfields	25 (Flying Training) Group	Training Command controlled Flying Refresher Schools and Advanced Flying Schools	15-03-51 – 01-06-58	Disbanded and merged into 22 and 24 Groups
White Waltham	28-01-61					
Market Drayton		Buntingsdale Hall	20 (Training) Group	Reformed in Training Command to control 3, 6, 8, 9 and 10 School of Technical Training and 3 to 7 Recruits Receiving Centres. To Technical Training Command 27-05-40	30-11-39 – 01-08-43	Disbanded to 22 Group

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HQ		Location	Group	Command	Period	Notes
Market Drayton		Buntingsdale Hall	22 (Technical Training) Group	Technical Training Command. Formed out of 20 and 72 Groups	01-08-43 – 31-01-72	Disbanded
Market Drayton	01-07-42	Buntingsdale Hall	29 (Flying Training) Group)	Flying Training Command. Controlled all Armament Gunnery Schools and Advanced Gunnery Schools in Northern England	01-07-42 – 14-07-45	Disbanded
Dumfries	07-07-42	Cargen House Troqueer				
Medmenham		Danesfield Court	90 (Signals) Group	Bomber Command. Took over the function of 26, 60 and 100 Groups and 80 Wing	25-04-46 – 02-11-58	Became Signals Command
Medmenham		Danesfield Court	90 (Signals) Group	Formed from Signals Command in Strike Command, to Maintenance Command 01-05-72	01-01-69 – 31-08-73	Disbanded Support Command
Medmenham		Danesfield Court	Signals Command	Formed from 90 (Signals) Group controlled Tangmere and Watton	03-11-58 – 01-01-69	Reverted to 90 (Signals) Group
Mildenhall	01-04-37	Airfield	4 (Bomber) Group	Bomber Command	01-04-37 – 08-05-45	To Transport Command as 4 (Transport) Group
Linton-on-Ouse	29-06-37	Airfield				
York	07-04-40	Heslington Hall				
Mildenhall	01-09-37	Airfield	5 (Bomber) Group	Bomber Command. Formed from 3 Group	01-09-37 – 15-12-45	Disbanded
Grantham	02-10-37	St Vincents				
Swinderby	14-11-43	Morton Hall				
Milton Ernest	01-01-45	The Hall	47 (Transport) Group	Transport Command	01-01-45 – 01-11-49	Redesignated as 46 Group
Abingdon	15-04-48	Airfield				
Milton Ernest		The Hall	48 (Transport) Group	Transport Command - Detachment at Little Staughton	29-10-45 – 15-05-46	Disbanded into 47 Group
Montrose		Aerodrome	21 Group	5 Area/North Western Area	01-04-18 – 01-07-18	Disbanded into 20 Group
Netheravon	11-10-43	Airfield	38 (Airborne Forces) Group	Tactical Air Force, Fighter Command, to HQ Allied Expeditionary Force 15-11-43, Air Defence of Great Britain on 10-11-44. Then to Transport Command 01-06-45	11-10-43 – 01-02-51	Disbanded
Marks Hall	12-10-44	Marks Hall				
Upavon	31-05-46	Airfield				

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HQ		Location	Group	Command	Period	Notes
Newcastle	01-03-39	3 Windsor Terrace	33 (Barrage Balloon) Group	Balloon Command	01-03-39 – 04-09-44	Disbanded into 30 Group
Hull	03-04-40	Newlands House Beverley Rd				
Sheffield	04-07-40	Parkhead House Parkhead				
Newcastle	07-04-40	3 Windsor Terrace	34 (Barrage Balloon) Group	Balloon Command	07-04-40 – 19-07-43	Disbanded into 33 Group
Edinburgh	15-05-40	Tor House Corstorphine				
Newcastle		unknown	17 Group	4 Area/North Eastern Area	01-04-18 – 08-08-18	Became 17 (Training Group)
Newcastle	08-08-18	unknown	17 (Training) Group	North Eastern Area previously 17 Group	08-08-18 – 18-10-19	Disbanded (elements became part of 20 Group)
Marske	unknown	Airfield				
North Queensferry	00-06-19	unknown	29 (Fleet) Group	Coastal Area 15-09-19	00-08-19 – 31-03-22	Disbanded into Coastal Area
Donibristle	21-06-21	unknown				
Northwood		Eastbury Park	18 (Maritime) Group 18 Group 18 (Maritime and Patrol) Group	Strike Command	28-11-69 – 01-04-96	Disbanded to 11/18 Group
Norton	23-07-46	old Balloon Depot	64 (Northern Reserve) Group	Reserve Command. Dropped 'Reserve' from title 01-08-50. Acquired 63 (Western and Welsh) Group 01-01-57, 66 (Scottish) Group 01-02-57 and 67 (Northern Ireland) Group on 01-02-57	23-07-46 – 31-03-59	Disbanded
York	01-05-47	Heslington Hall				
Rufforth	15-01-53	Airfield				
Ouston	01-01-61	Airfield	11 (Fighter) Group	Fighter formed from 13 Group	01-01-61 – 01-04-63	Disbanded to 11 Sector
Leconfield	25-09-61					
Oxford		4 Norham Gardens	2 Group	South Eastern Area. Controlled 21st and 60th Wings	01-04-18 – 08-08-18	Became 2 (Training) Group

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HQ		Location	Group	Command	Period	Notes
Oxford	08-08-18	4 Norham Gardens	2 (Training) Group	South Eastern Area. Controlled 21st and 60th Wings	08-08-18 – 31-03-20	Disbanded
Oxford	27-11-18	Merton College				
Uxbridge	07-07-19	Hillingdon House?				
Oxford	15-07-43	Cowley Barracks	84 (Composite) Group	2nd TAF	15-07-43 – 05-09-43	Moved to France
Leatherhead	unknown	unknown				
Goodwood	unknown	Unknown				
Plymouth	05-02-41	Mount Wise Barracks	19 (General Reconnaissance) Group	Coastal Command	05-02-41 – 28-11-69	Became HQ Southern Maritime Air Region
Mount Batten	28-07-47					
Preston		Barton Hall, Longley Lane	9 (Fighter) Group	Fighter - reformed for north-western defence. Acquired 51 & 62 OTUs from 81 Group on 15-04-43	09-08-40 – 15-09-44	Disbanded into 12 Group
Preston		Barton Hall, Longley Lane	Western Sector		15-12-50 – 25-10-57	Disbanded
Radlett	08-11-43	Airfield	100 (Special Duties) Group	Details unknown	08-11-43 – 17-12-45	May be Feltwell instead of Radlett – Disbanded
West Raynham	03-12-43	Airfield				
East Dereham	18-01-44	Bylaugh Hall				
Reading		Shinfield Park	Flying Training Command	Controlled all UK-based flying training airfields. Initially with 21, 23, 25, 50, 52 & 54 Groups	27-05-40 – 01-06-68	Became part of Training Command
Reading		Shinfield Park	Technical Training Command	Formed out of Training Command controlled 20, 24, & 26 Groups, taking over 22 Group on 01-08-43	27-05-4 – 01-06-68	Absorbed into Training Command
Brampton	29-10-45	Brampton Grange				
Reading	30-08-39	Sylvesters, Berkeley Avenue	54 (Training) Group	Reserve Command. To control the Initial Training Wings. To Flying Training Command 27-05-40.	30-08-39 – 17-06-46	Disbanded
Bexhill-on-Sea	26-03-40	'Barbados', East Parade				
Torquay	01-07-40	'Alta Vista' Higher Warberry				
Torquay	20-04-41	Torre Abbey				
Sunningdale	01-09-41	Dormy House and Tile House				

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Redhill	01-04-43	Airfield?	83 (Composite) Group	Formed from Z Group (a temporary group) for Allied Expeditionary Air Force/2nd TAF with 121 & 124 Airfields	01-04-43 – 07-06-44	Moved to France
Reigate	22-04-43	Gatton Park				
Rickmansworth	02-05-46	unknown	61 (Eastern Reserve) Group	Reserve Command. Dropped 'Reserve' from title. Absorbed 65 Group	02-05-46 – 31-11-56	Became 61 (Southern Reserve) Group at Kenley
Kenley	01-08-46	Airfield				
Ruislip		unknown	Eastern Air Command	Formed for North Africa	01-09-42 – 13-11-42	Moved to Algiers
Salisbury		Chafyn Grove, Salisbury School	2 Area HQ	Controlled 7 to 10 Groups, 11 (Equipment) Group and Home Defence units	01-04-18 – 08-05-18	Became South-Western Area
Salisbury		Rokeby, Waine-a-Long Rd	7 Group	Formed from Southern Training Brigade in 2 Area. Later under South Western Area controlling 4th, 17th, 18th, 21st, 23rd, 28th & 33rd Wings	01-04-18 – 08-08-18	Became 7 (Training) Group
Salisbury		Delapre, Manor Rd.	7 (Training) Group	From 7 Group. South Western Area controlling 4th, 17th, 18th, 21st, 23rd, 28th & 33rd Wings	08-08-18 – 16-08-19	Disbanded into South Western Area
Salisbury	08-08-18	Delapre, Manor Rd.	7 Group	Reformed from South Western Area in Southern Area	20-09-19 – 12-04-26	Disbanded into Wessex Bombing Area
Andover	04-12-19	Airfield				
Salisbury	01-01-17	St Martin's Clergy House	Southern Group Command	Controlled 4th, 17th, 21st & 25th Wings	01-01-17 – 05-08-17	Became Southern Training Brigade
Salisbury	30-07-17	'Rokeby' Waine-a-Long Road				
Salisbury		'Rokeby' Waine-a-Long Road	Southern Training Brigade	Controlled 4th, 17th, 18th, 21st & 33rd Wings.	05-08-17 – 01-04-18	Became 7 Group
Salisbury	08-05-18	Chafyn Grove	South Western Area	Controlled 7, 8, 9, & 10 Groups. Absorbed 7 Group 16-08-19	08-05-18 – 20-09-19	Became 7 Group
Salisbury	16-08-19	'Dalapre' Manor Road				
Sealand	16-12-40	Airfield	81 (Training) Group	Fighter Command. Formed to control fighter Operational Training Units	16-12-40 – 15-04-43	Disbanded and units transferred to 9 Group
Worcester	19-02-41	Tallow Hall				
Avening	12-12-41	Avening Court				
Sopley Park		Radar Stn	21 (Base Defence) Sector	85 Group (141 Wing)	12-05-44 – 01-06-44	Moved to France

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
South Farnborough	12-04-26	Unknown	22 (Army Co-op) Group	Inland Area, Fighter Command 14-07-36. Independent Group under the Air Ministry 24-06-40	12-04-26 – 30-11-40	Disbanded 30-11-40 and divided into 70 & 71 Groups
Farnborough Secondary School	22-03-40	Farnborough Road				
Southampton		1 Cumberland Place	8 Group	2 Area/South Western Area. Controlled 34th Wing	01-04-18 – 08-08-18	Became 8 (Training) Group
Southampton		1 Cumberland Place	8 (Training) Group	South Western Area. Controlled 34th Wing	08-08-18 – 15-05-19	Disbanded
Spitalgate	12-04-26	Airfield	23 Group	Inland Area	12-04-26 – 30-04-36	Renamed 23 (Training) Group
Grantham	14-08-26	'St Vincents'				
Stanmore		Bentley Priory	11 (Fighter) Group	Strike Command	01-04-68 1986	Became 11 (Air Defence) Group
Stanmore		Bentley Priory	11 (Air Defence) Group	Strike Command	1986 – 01-04-96	Disbanded and became 11/18 Group at Bentley Priory
Stanmore		Bentley Priory	Air Defence of Great Britain	Reformed out of Fighter Command	15-11-43 – 16-10-44	Reverted to Fighter Command
Stanmore		Bentley Priory	Fighter Command	Formed to control all UK-based fighter groups	14-07-36 – 15-11-43	Disbanded on formation of ADGB, AEAF and 2nd TAF
Stanmore		Bentley Priory	Fighter Command	Reformed from ADGB to control all UK-based fighter groups	16-10-44 – 30-04-68	Redesignated 11 Group to combining with Bomber Command to form Strike Command
Stanmore	01-05-36	Bentley Priory	Training Command	Formed from Inland Area to control 23, 24 & Armament Groups. Took over 25 & 26, 21 & 20.	01-05-36 – 27-05-40	After moving to Reading it split into Flying Training Command and Technical Training Command
Market Drayton	13-07-36	Buntingsdale Hall				
Reading	15-01-40	Shinfield Park				
Stanmore	30-04-68	Bentley Priory	Strike Command	Formed by merging Bomber and Fighter Commands which became 1 (Bomber) Group and 11 (Fighter) Group. Air Engineering Staff at Walters Ash High Wycombe. Absorbed Air Support Command to consist of 1, 11, 18, 38 & 46 Groups. Both elements combined as a single command HQ on 17-12-72 at High Wycombe	30-04-68 – Extant	Extant

Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
High Wycombe	17-12-72	Walters Ash				
Stanmore	01-01-44	Uxbridge Road	46 (Transport) Group	Transport Command	01-01-44 – 30-06-45	Moved to France
Bushy	00-04-44	Bushy Hall Hotel				
Stanmore		Bentley Priory	Air Defence of Great Britain	Fighter Command	15-11-43 – 16-10-44	Reverted to Fighter Command
Stanmore		Kestrel Grove, Hive Road and Norfolk House, St James's Square London	Allied Expeditionary Air Forces	(Controlled 2nd TAF, ADGB, 38 Group & 85 Group)	15-11-43 – 14-10-44	Became RAF Element Supreme Headquarters Allied Expeditionary Air Forces
Stenness		Marine Aerodrome	28 (Orkney and Shetland Isles) (Operations) Group	Controlled Marine Operations Stations in the Orkney and Shetland Islands	13-07-18 – 15-04-19	Disbanded
Stirling		Station Hotel	22 Group	North Western Area	01-07-18 – 08-08-18	Became 22 (Operations) Group
Stirling		Station Hotel	22 (Operations) Group	North Western Area	08-08-18 – 30-05-19	Disbanded
Thorney Island		Airfield	20 Sector	123, 136 & 146 Wings	12-05-44 – 12-07-44	Disbanded
Upavon	01-01-60	Airfields	38 (Air Support) Group	Strike Command 01-07-72	01-01-60 – 17-11-83	Disbanded into 1 Group
Odiham	17-05-60					
Benson	15-05-72					
Upavon	10-11-75					
Upavon		Airfield	46 Group	Formed from Air Support Command as air support element of Strike Command.	01-09-72 – 01-01-76	Disbanded into 38 Group
Upavon		Airfield	Air Support Command		01-08-67 – 01-09-72	Disbanded

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Upminster		unknown	Eastern Home Defence Wing	Responsible for Home Defence of eastern England	24-09-17 – 29-10-17	Redesignated as 49th Wing
Uxbridge	01-05-36	Hillingdon House	11 (Fighter) Group	Fighter Command formed from Fighting Area	01-05-36 – 31-12-60	Disbanded
Martlesham Heath	02-06-58					
Uxbridge	14-07-36	Hillingdon House	Bomber Command		14-07-36 – 30-04-68	Redesignated as 1 (Bomber) Group which combined with Fighter Command to form Strike Command
High Wycombe	13-03-40	Walters Ash				
Uxbridge	01-04-20	Hillingdon House	Inland Area	Formed to control 1, 3 & 7 Groups	01-04-20 – 01-05-36	Redesignated as Training Command
Stanmore	01-06-26	Bentley Priory				
Uxbridge	01-04-37		12 (Fighter) Group	Fighter Command	01-04-37 – 01-04-63	Disbanded and replaced by 12 Sector
Hucknall	18-05-37					
Watnall	08-07-40	Operations Block				
Newton	20-12-46	Airfield				
Horsham St Faith	14-08-59	Airfield				
Uxbridge		Hillingdon House	Air Defence of Great Britain	Wessex Bombing Area and Fighting Area	01-06-26 – 13-07-36	Disbanded on formation of Fighter Command
Uxbridge		Hillingdon House	Southern Area Command	Formed from South Eastern Area and South Western Area, controlled 1, 2, & 7 Groups	20-09-19 – 01-04-20	Disbanded into Inland Area
Uxbridge	02-12-43	Sports Pavilion, RAF Uxbridge	85 (Base) Group	TAF/2nd TAF. Became 85 (Maintenance and Training) Group	02-12-43 – 17-08-44	Moved to Belgium
Hillingdon	16-01-44	unknown				
Warsash	08-08-18	near Southampton	10 (Operations) Group	South Western Area and Coastal Area. Controlled 74th Wing	08-08-18 – 18-01-32	Disbanded into Coastal Area
Lee-on-Solent	12-07-20	Marine Aerodrome				

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
Wartling		Radar Stn	24 (Base Defence) Sector	(147 & 148 Wings)	12-05-44 – 11-07-44	Moved to Belgium
Watnall	01-01-52	Dispersed Operations Block	81 (Training Group)	Fighter Command to control all fighter Operational Conversion Units	01-01-52 – 31-03-58	Disbanded
Box	16-06-52	Rudlow Manor				
Watnall	04-04-55	Operations Block	13 (Fighter) Group	Fighter Command	04-04-55 – 01-01-61	Disbanded and redesignated 11 Group
Ouston	01-07-55	Airfield				
West Drayton		Porters Way, Hillingdon	21 Group	Inland Area formed to control stores, repair depots, schools as well as 15 & 22 Sq. at Martlesham Heath	12-04-26 – 01-02-34	Disbanded to Inland Area
White Waltham		Airfield	Air Transport Auxiliary		1940 – 09-45	Disbanded
White Waltham		Airfield	Home Command	Formed from Reserve Command	01-08-50 – 31-05-59	to Flying Training Command
White Waltham	01-05-60	Airfields	Headquarters Air Cadets		01-05-60 – Extant	Became HQ University & Air Cadets at Cranwell. reformed as HQ Air Cadets
Brampton	23-09-68					
Newton	00-12-75					
Cranwell	10-08-95					
Wilmslow	02-05-46	RAF Camp, Summerfields	63 (Western and Welsh) Reserve	Reserve Command Dropped 'Reserve' from title 01-08-50.	02-05-46 – 01-01-57	Disbanded into 64 Group
Hawarden	23-07-46	Airfield				
Winslow		Winslow Hall, Bucks	92 (Operational Training) Group	Bomber Command - formed from 7 Group to control a number of Bomber Operational Training Units	11-05-42 – 15-07-45	Disbanded
Wyton		Airfield	8 Group	Path Finder Force	15-08-42 – 08-01-43	
Wyton	15-08-42	Airfield	8 (Pathfinder Force) Group	From 8 Group	15-05-43 – 15-12-45	Disbanded
Huntington	15-05-43	Castle Hill House				

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Headquarter Locations of RFC Brigades, RAF Commands and Groups, 1914–2000 (<i>contd</i>)						
HQ		Location	Group	Command	Period	Notes
York	12-06-19	Acomb Hall York	Northern Area Command	Took over 18 Group, absorbed Midland Area with 3, 12 & 16 Groups	12-06-19 – 01-04-20	Combined with Southern Area Command (01-04-20) to form Inland Area
Leamington Spa	18-10-19	Somerset House, Clarendon Place Leamington Spa				
York		Fossgate	16 Group	4 Area/North Eastern Area formed from Northern Training Brigade to administer 8th, 19th, 23rd & 46th Wings	01-04-18 – 08-08-18	Became 16 (Training) Group
York	01-04-18	Fossgate	16 (Training) Group	North Eastern Area, 12-06-19 to Northern Area with 7th, 8th, 9th & 19th Wings	08-08-18 – 07-02-20	Disbanded
Tadcaster	18--10-19	Aerodrome				
York	unknown	Acomb Hall	4 (Transport) Group	Formed from 4 (Bomber) Group, Transport Command	08-05-45 – 14-02-48	Disbanded
York	08-05-45	Heslington Hall				
Abingdon	01-05-47	Airfield				
York		Racecourse Buildings	19 Group	4 Area/North Eastern Area	01-04-18 – unknown	Fate unknown
York		Racecourse Buildings	4 Area HQ	Controlled 16 to 18 Groups, 19 (Equipment) Group & Home Defence Units	01-04-18 – 08-05-18	Became North-Eastern Area
York		134 The Mount York	Northern Group Command	Controlled 8th, 19th, 23rd & 24th Wings	01-01-17 – 05-08-17	Became Northern Training Brigade
York		134 The Mount	Northern Training Brigade	Formed from Northern Group Command to control 8th, 19th & 46th Wings	05-08-17 – 01-05-18	Became 16th Group
York		Racecourse Buildings	North Eastern Area	Formed from No.4 Area	08-05-18 – 23-05-19	Disbanded into North-Western Area
York	00-06-18	unknown	Northern Group	details unknown	00-06-18 – 22-06-18	Became 24 (Northern) (Operations) Group
Leeds	10-06-18	Castle Grove Headingley				

Table 18 – Headquarters of RAF Bases, Sectors and Wings, 1914–2000						
HQ		Location	Wing	Group and Units	Period	Notes
Abingdon		Airfield	71 (Bomber) Wing	Advanced Air Striking Force with 15 & 40 Sqns.	24-08-39 – 02-09-39	Moved to France
Acklington	16-02-44	Airfield	24 (Base) Defence Wing	85 Group controlled 147 and 148 airfields	16-02-44 – 11-05-44	Redesignated as 24 Base Defence) Sector 12-05-44
Newcastle	15-03-44	Blakelaw				
Stapleford Tawney	27-04-44	Airfield				
Wartling	03-05-44	Wartling RDF Station				
Andover		Airfield	50 (Army Co-operation) Wing	22 Group, responsible for northern region	11-05-39 – 01-10-39	Moved to France before becoming SHQ West Malling
Andover		81 Weyhill Road	53 (Maintenance) Wing	41 Group	24-03-41 – 01-01-46	Disbanded
Andover	25-04-42	HQ Maintenance Command Andover	54 (Maintenance) Wing	Administration of all RAF MT Companies	25-04-42 – 09-10-46	Disbanded
Swiss Cottage	19-07-42	'Northways' College Crescent Swiss Cottage,				
Derby	19-09-44	Egginton Hall, Derby				
Andreas/Ramsey		Airfield and Dispersed Operations Block	Andreas Sector	9 Group Controlled fighter squadrons based at Andreas and Jurby		
Annan		Airfields	56 (Maintenance) Wing	26 Group controlled 14, 17, 35, 62, 68, 69, 79, 87, 205, 209, 217, 220 and 239 Maintenance Units	22-07-44 – 15-10-46	Disbanded
Warton	15-05-46					
Appledram	12-05-44	Airfields	134 (Czech) (Fighter) Wing	84 Group, 2nd TAF controlled various Czech fighter squadrons including 310, 312 and 313	12-05-44 – 24-08-45	Believed disbanded and squadrons moved to Czechoslovakia
Tangmere	22-06-44					
Lympne	03-07-44					
North Weald	27-08-44					
Bradwell	30-12-44					
Manston	27-02-45					

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Ayr	28-02-43	Airfield	105 (Combined Operations) Wing	26 Group controlled 1441 Flight and Combined Signals School	28-02-43 – 15-08-44	Disbanded
Kilmarnock	17-04-43	Dankeith House Kilmarnock				
Barkston Ash	17-02-41	The Towers Barkston Ash	73 (Signals) Wing	60 Group responsible for ground RDF stations covering the Tees to the Wash	17-02-41 – 01-11-46	Disbanded
Malton	10-05-41	Eastthorpe Hall Malton				
Boston Spa	18-09-44	Boston Spa				
Beaulieu		Aerodrome	17th Wing RFC	8 Group controlled units at Gosport and Beaulieu	02-08-17 – 12-08-18	Disbanded
Benson		Airfield	74 (Bomber) Wing	Advanced Air Striking Force with 103 and 150 Squadrons	24-08-39 – 02-09-39	Moved to France
Benson		Airfield	104 (Photographic Reconnaissance) Wing	106 Group, controlled 104 (PR) Squadron	05-02-45 – 11-03-45	Moved to France before returning to Mount Farm and disbanding 01-10-45
Benson		Airfield	106 (Photographic Reconnaissance) Wing	16 Group, controlled 540 to 544 Squadrons	03-07-43 – 14-04-44	Redesignated as 106 (PR) Group
Bicester		Airfield	76 (Bomber) Wing	Absorbed Advanced Striking Force from Benson with 12 and 42 Squadrons	24-08-39 – 02-09-39	Moved to France before evacuating to Feltwell where it disbanded
Biggin Hill		Airfield	5th Wing	Controlled all fighter squadrons north of the Thames	01-04-23 – 1924	Disbanded
Biggin Hill	00-11-45	Airfields	South Eastern Sector HQ	Unknown	00-11-45 – 15-06-46	Disbanded into Metropolitan Sector
North Weald	00-06-46					
Biggin Hill		Airfield	Biggin Hill Sector C	11 Group, Sector C controlling fighter squadrons based at or flights detached to Biggin Hill, Gravesend (C1) and Manston		
Binbrook		Airfield	12 Base	1 Group controlled squadrons at Binbrook, Grimsby, Kelstern and Wickenby	25-04-43 – 12-04-45	Disbanded

Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Bircham Newton		Aerodrome?	86th (Night) Wing	27 Group training to bomb Germany from UK bases	29-09-18 – 10-12-18	Disbanded
Bircham Newton		Aerodrome?	87th (Night) Wing	27 Group training to bomb Germany from UK bases	29-08-18 – 10-12-18	Disbanded
Blandford		unknown	83rd Wing	unknown units	13-06-18 – 12-08-18	Moved to France
Blandford		unknown	88th (Day) Wing	8th Brigade unknown units	17-10-18 – 00-11-18	Disbanded
Bognor	12-05-44	Airfields	132 (Fighter) (Norwegian) Wing	84 Group, 2nd TAF with various units including 66, 331 and 332 Squadrons	12-05-44 – 00-08-44	Moved to France
Tangmere	21-06-44					
Funtingdon	06-08-44					
Ford	13-08-44					
Boscombe Down		Airfield	75 (Bomber) Wing	Advanced Striking Force with 88 and 218 Squadrons	24-08-39 – 02-09-39	Moved to France before evacuating to Scampton
Bottesford		Airfield	72 Base	7 Group controlled squadrons at Bottesford, Langar, and Saltby	07-10-44 – 01-04-45	Disbanded
Boulmer		Airfield	13 (Scotland) Sector		01-04-63 – 17-03-65	Amalgamated with 11 Sector
Brandon		79 London Road	39th (Training) Wing	3 Group (unknown units)	27-10-17 – 04-04-19	Disbanded
Brinscombe	21-05-41	Gatcombe Park Brimscombe	52 (Maintenance) Wing	41 Group Controlling 5, 6, 8, 10, 15, 19, 20, 33, 38 and 39 Maintenance Units	21-05-41 – 21-11-42	Disbanded
Cheltenham	29-08-41	Dowdeswell, Court, Cheltenham				
Bristol	09-08-16	Filton Aerodrome	21st (Training) Wing RFC	Southern Training Brigade and Western Group Command. Stations included Beaulieu, Bicester, Ford Junction, Lilbourne, Port Meadow, Rendcomb, Weston-on-the-Green, Witney and Yatesbury.	09-08-16 – 08-02-19	Disbanded
Cirencester	02-09-16	Cirencester Castle				

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Bristol		'Hill End' Henbury	76 (Signals) Wing	60 Group responsible for RDF stations between the Thames and Isle of Wight	17-02-41 – 30-06-43	Disbanded
Bristol	25-05-41	'Hill End' Henbury	78 (Signals) Wing	60 Group responsible for RDF stations in the Plymouth area	25-05-41 – 31-07-46	
Newton Abbott	17-07-41	Holne Park Hotel, Ashburton,				
Broughton		Broughton Hall	51 (Maintenance) Wing	Responsible for 9, 24, 27, 29, 37, 48 and 51 MUs	21-04-41 – 21-11-42	Disbanded
Bucksburn		Bucksburn House	71 (Signals) Wing	60 Group responsible for RDF stations from the Firth of Forth to the Moray Firth	17-02-41 – 30-06-43	Disbanded
Calshot		Marine Aerodrome	74th (Operations) Wing	10 Group controlling units at Calshot	08-08-18 – 15-05-19	Disbanded
Cambridge		unknown	Midlands HD Wing	Controlled HD units protecting the Midlands	01-10-17 – 29-10-17	Became 47th Wing
Castle Bromwich		Aerodrome	25th (Training) Wing RFC	Southern Group Command 29-09-17, Western Group Command 26-09-17 and 13th Group 01-04-18 with Lilbourne, Tern Hill and Castle Bromwich	18-09-16 – 01-17-18	Disbanded
Castle Camps	01-03-44	Aerodromes	25th (Base Defence) Wing	11 Group controlling 149 and 150 Airfields	01-03-44 – 12-05-44	Redesignated as 25 (Base Defence) Sector
Hornchurch	00-05-44					
Catterick	15-11-15	Aerodrome	8 Wing RFC, Northern Group Command, Northern Training Brigade	5th Brigade. Administered units at Beverley, Doncaster, Lilbourne, Bramham Moor, Papplewick and Birmingham	15-11-15 – 30-06-19	Disbanded
York	07-02-16	26 Blossom St and The Mount				
Catterick		Airfield	Catterick Sector O?	13 Group controlling fighter squadrons based at or flights detached to Catterick		
Chailey	12-05-44	Airfields	131 (Fighter) (Polish) Wing	84 Group, 2nd TAF controlling various Polish units including 302, 308 and 317 Squadrons. Formed from 131 Airfield	12-05-44 – 22-07-44	Moved to France
Appledram	28-06-44					
Ford	16-07-44					
Chingford		Whitehall	56th (Training) Wing	To control Chingford, Fairlop and London Colney	00-08-18 – 15-05-19	Disbanded

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HQ		Location	Wing	Group and Units	Period	Notes
Church Fenton		Airfield	21 Base Defence Wing	85 Group controlling 141 Airfield	01-01-44 – 26-04-44	Moved to Sopley Park, becoming 21 (Base Defence Sector)
Church Fenton		Airfield	Church Fenton Sector N?	12 Group controlling fighter squadrons based at or flights detached to Church Fenton, Leconfield and Ringway		
Colerne		Airfield	Colerne Sector	10 Group initially controlling fighter squadrons based at or flights detached to Colerne and Filton		
Coningsby		Airfield	54 Base	5 Group controlled squadrons at Coningsby, Metheringham and Woodhall Spa	01-01-44 – 01-11-45	Disbanded
Coolham	12-05-44	Airfields	133 (Polish) (Fighter) Wing	84 Group, 18 Sector controlling various units including 129, 306, and 315 Squadrons Formed from 133 Airfield	12-05-44 – 10-10-44	Became part of 11Group and moved to Andrewsfield 10-11-44 before disbanding 07-08-45
Holmsley South	22-06-44					
Ford	26-06-44					
Brenzett	09-07-44					
Coltishall		Airfield	Coltishall Sector J	12 Group, Sector J initially controlling squadrons based at or flights detached to Coltishall		
Cranwell		Aerodrome	59 Wing	12 Group controlling units at Cranwell and Scopwick	27-08-18 – 24-06-19	Disbanded
Croydon		Airport	110 (Transport) Wing	46 Group responsible for operations on the Croydon-Munich-Vienna route	03-07-44 – 04--02-46	Operations transferred to BOAC before disbanding 15-02-46
Deanland	12-05-44	Airfields	149 (Long Range Fighter) Wing	85 Group, 2nd TAF with various units including 64, 234 and 611 Squadrons	12-05-44 – 20-09-44	Moved to Belgium
Zeals	29-06-44					
Colerne	28-07-44					
Debden		Airfield	60 (Fighter) Wing	Air Ministry control to provide fighter protection for the Army Field Force with 1, 73, 85 and 87 Squadrons plus three mobile RDF sets	30-08-39 – 04-09-39	Moved to France
Debden		Airfield	Debden Sector F	11 Group Sector F. Initially controlling fighter squadrons based at or flights detached to Debden, Martlesham Heath and Castle Camps (F1).		

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Derby		New Municipal Buildings	55 (Barrack and Clothing) Wing	Controlled A, E, H, S and T MUs then 16, 25, 61, 66, 72, 89, 99, 203, 204, 207, 216, 221, 227, 236, 241 and 262 MUs	01-08-42 – 15-01-47	Became 55 (Maintenance Wing before disbanding
Digby		Airfield	Digby Sector L	12 Group, initially controlling fighter squadrons based at or flights detached to Digby and Ternhill		
Digby	23-07-45	Airfield	Fighter Sector HQ Digby/Lincolnshire Sector	12 Group Fighter Sector HQ	23-07-45 – 12-07-46	Disbanded into Eastern Sector
Blankney	27-08-45	Blankney Hall				
Dover	30-08-15	Swingate Down Aerodrome	6th Wing RFC	Eastern Group Command (10-01-17), 1 Group (01-04-18). Controlled units at Dover, Shoreham, Wye and Gosport. Reorganised 03-07-18 to control Dover, Wye and Manston	30-08-15 – 22-11-19	Disbanded
Maidstone	08-09-16	Barming Place, Maidstone				
Driffield		Airfield	43 Base	4 Group controlled squadrons at Driffield, Leconfield and Lissett	06-06-43 – 01-09-45	Disbanded
Dundee		Stannergate Marine Aerodrome	78 (Operations) Wing	22 Group controlled 249 and 257 Squadrons, 1 Torpedo Training Squadron with stations at Dundee, East Fortune and Leuchars	08-08-18 – 11-18	Disbanded
Dunsfold	03-12-42	Airfields	39 Reconnaissance Wing, (RCAF)	Army Co-operation Command with various units including 168, 400 and 414 Squadrons	03-12-42 – 25-06-44	Moved to France
Odiham	01-04-44					
Old Sarum	20-06-44					
Dunsfold		Airfield	139 (Bomber) Wing	2 Group, 2nd TAF with 98, 180 and 320 Squadrons. Formed from 139 Airfield	12-05-44 – 15-10-44	Moved to Belgium
Duxford	17-02-41	Airfield	74 (Signals) Wing	60 Group, responsible for RDF stations from the Thames to the Wash. Admin section moved to Cambridge, aircraft remained at Duxford	17-02-41 – 30-06-43	Disbanded
Cambridge	18-05-41	Leighton House, Trumpington Cambridge and 'Brooklands' Cambridge				
Duxford		Airfield	Duxford Sector G	11 Group Sector F, on reorganisation became 12 Group Sector G. Initially controlling squadrons based at or flights detached to Duxford and Fowlmere (G1)		

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HQ	Location	Wing	Group and Units	Period	Notes
Duxford	Airfield	Duxford Wing	Unofficial wing also known as the '12 Group Wing' firstly with three squadrons, then five, then 2 to 5.	00-09-40 - 27-11-40	Unofficially disbanded
Dyce	Airfield	Dyce Sector	13 Group, initially controlling fighter squadrons or flights detached to Dyce and Montrose		
Eastchurch	Aerodrome	58th (Training) Wing	1 Group, controlling units at Eastchurch, Leysdown and Joyce Green	01-04-18 – 21-12-18	Disbanded
East Kirkby	Aerodrome	55 Base	5 Group, controlled squadrons at East Kirkby, Strubby and Spilsby	15-04-44 – 01-11-45	Disbanded
Elsham Wolds	Airfield	13 Base	1 Group controlled squadrons at Elsham, Kirmington, and North Killingholme	01-12-43 – 24-07-45	Disbanded
Exeter	Airfield and Dispersed Operations Block	Exeter Sector			
Exeter	Dispersed Operations Block	Western Sector HQ	11 Group	16-01-45 – 15-07-46	Disbanded control taken over by Southern Sector HQ
Farnborough	Aerodrome	Administrative Wing	To control RFC Depot, RFC Records and Aircraft Park and 1 and 2 Reserve Squadrons	29-11-14 – 13-01-18	Became Reserve Depot RFC
Farnborough	Airfield	1 Army Co-op	7 Group, with 4 and 13 Squadrons	05-01-26 – 12-04-26	Disbanded
Felixstowe	Marine Aerodrome	70th (Operations) Wing	4 Group, controlled 230–232, 247, 259 and 261 Squadrons at Felixstowe and Aldeburgh	20-08-18 – 01-05-19	Disbanded
Felixstowe	Marine Aerodrome	76th (Operations) Wing	4 Group, controlled 232, 247, 259 and 261 Squadrons	20-08-18 – 01-12-18	Disbanded into 70th Wing
Filton	Airfield	Filton Sector W	11 Group until 18-07-40, then 10 Group, Sector W. Controlled fighter squadrons based at or flights detached to Filton, Exeter and Bibury		
Ford	Airfield	125 (Fighter) Wing	83 Group, 15 Sector, 2nd TAF. Formed from 125 Airfield	12-05-44 – 17-06-44	Moved to France
Ford	Airfield	144 (RCAF) (Fighter) Wing	83 Group, 15 Sector, 2nd TAF. Formed from 144 Airfield	12-05-44 – 12-06-44	Moved to France
Gainsborough	The Lawns, Summerhill Rd., North Sandfields	48th (Home Defence) Wing RFC	6th Brigade. Formed from North Midland Home Defence Wing with 33 and 188, 189 and 199 (Night) Training Squadrons	01-02-18 – 18-04-19	Disbanded

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HQ		Location	Wing	Group and Units	Period	Notes
Gosport		Aerodrome	5th Wing RFC	Formed to train 8 and 13 Squadrons for ops overseas	29-11-14 – 07-11-15	Moved to Middle East
Gosport	08-11-15	Gosport Aerodrome	7th Wing RFC	Controlled Fort Grange, Fort Rowner (Gosport), Shoreham and Brooklands. On moving to Norwich controlled units at Narborough, Norwich, Orfordness, Sedgeford, Thetford and Wyton	08-11-15 – 12-09-18	Disbanded
Norwich	01-05-16	Mousehold Heath Aerodrome				
King's Lynn	08-01-18	Belgrave House St John's Terrace				
Gosport	09-08-16	Aerodrome	17th Wing RFC	Southern Group Command to control units at Gosport and Beaulieu, becoming part of Southern Group Command. Part of 8 Group (01-04-18) and 7 Group (13-05-18)	09-08-16 – 02-08-17	Disbanded Beaulieu
Beaulieu	02-08-17					
Gravesend	12-05-44	Airport and Airfields	122 (Rocket Projectile) Wing	83 Group, 15 Sector, 2nd TAF with 19, 65 and 122 Squadrons	12-05-44 – 23-06-44	Moved to France
Funtington	13-05-44					
Ford	18-06-44					
Gravesend	12-05-44	Airport and Airfield	140 (Bomber) Wing	2 Group, 2nd TAF. Formed from 140 Airfield	12-05-44 – 05-02-45	Moved top France
Thorney Island	18-06-44					
Great Yarmouth		Marine Aerodrome	73rd (Operations) Wing	4 Group controlled 212, 228 and 229 Squadrons.	20-08-18 – 01-05-19	Disbanded
Hallington Hall	17-02-41	Newcastle	72 (Signals) Wing	60 Group responsibility for RDF stations from the Tees to the Firth of Forth	17-02-41 – 15-05-44	Disbanded
Dollar	30-03-41	Dollarbeg House, Dollar				
Harrietsham		Stede Court	53rd (Home Defence) Wing	6th Brigade controlling 50, 112 and 143 Squadrons	08-02-18 – 13-06-19	Disbanded
Hartford Bridge		Airfield	137 (Bomber) Wing	2 Group, 2nd TAF. Formed from 137 Airfield with 88, 226 and 342 Squadrons	12-05-44 – 16-10-44	Moved to France
Hartford Bridge	12-05-44	Airfields	141 (Fighter) Wing	85 Group, 2nd TAF. Formed from 141 Airfield with 264, 322 and 410 Squadrons	12-05-44 – 04-10-44	Became part of ADGB on 05-10-44, moved to Biggin Hill 18-10-44 and disbanded 05-11-44
Deanland	21-07-44					
Hartford Bridge (Blackbushe)		Airfield	141 (Fighter-Bomber) Wing	2 Group, 2nd TAF. Reformed with 418, and 615 Squadrons	25-11-44 – 14-03-44	Moved to Germany

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HQ		Location	Wing	Group and Units	Period	Notes
Harwell		Airfield	72 (Bomber) Wing	Advanced Air Striking Force.	23-08-39 – 02-09-39	Moved to France
Hawkinge	17-05-44	Airfield	157 (General Reconnaissance) Wing	16 Group with 119, 819 (RN), 854 (RN) and 855 (RN) Squadrons	17-05-44 – 23-08-44	Moved to Belgium
Swingfield	08-08-44	Airfield				
Bircham Newton	23-10-44	Airfield				
Aveley	18-08-44	S5 Transit Camp at Belhus Park, Aveley (detachment)				
Headcorn	04-07-43	Airfield	17 (Fighter) Wing	83 Group with 126 and 127 Airfields also taking over 144 Airfield	04-07-43 – 15-05-44	Redesignated as 17 Sector
Kenley	14-10-43					
Hendon	23-09-39	Aerodrome	61 Fighter Wing Servicing Unit	Formed for service overseas	23-09-39 – 01-10-39	Moved to France
Hartlebury	30-09-39	Universal Equipment Depot				
Hendon		Aerodrome	86th (Communications) Wing	With 1 and 2 Communications Squadrons and Air Council Inspection Squadron	00-02-19 – 28-10-19	Disbanded
Hendon		Hendon Hall Hotel Ashley Lane Hendon	107 (Transport) Wing	46 Group. Formed for service overseas	16-10-44 – 19-11-44	Moved to France
Hendon		Hendon Hall Hotel Ashley Lane Hendon and Officers' Mess No.2 RAF Hendon	116 (Transport) Wing	44 Group. Formed to take over scheduled services to India	01-01-44 – 01-01-45	Redesignated as 47 Group
Holme-on-Spalding Moor		Airfield	44 Base	4 Group controlled squadrons at Holme, Brighton and Melbourne	15-04-44 – 01-09-45	Disbanded
Holmsley South		Airfield	121 (Rocket Projectile) Wing	83 Group, 22 Sector	12-05-44 – 16-06-44	Moved to France
Hornchurch	00-12-43	Airfield	20 (Fighter) Wing	84 Group. Controlled 135 and 136 Airfields	00-12-43 - 12-05-44	On Move to Thorney Island it became 20 (Fighter) Sector on 12-05-44
Thorney Island	09-04-44					
Hornchurch	23-03-56	Airfield	160 Wing	61 Group	23-03-56 – 00-12-56	Moved to Christmas Island
Lyneham	00-11-56					
Hornchurch		Airfield	25 (Base Defence) Sector	(150 Wing)	12-05-44 – 17-08-44	Moved to France

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HQ		Location	Wing	Group and Units	Period	Notes
Hornchurch		Airfield	Hornchurch Sector D	11 Group, Sector D. Controlling fighter squadrons based or flights detached to Hornchurch and Rochford		
Horne	12-05-44	Airfields	142 (Fighter) Wing	85 Group, 2nd TAF. Formed from 142 Airfield with 130, 303 and 402 Squadrons	12-05-44 – 30-07-44	Moved to France
Hartford Bridge	25-06-44					
Hornsey		Marine Aerodrome	79 (Operations) Wing	18 Group, controlled 248 and 251 Squadrons	26-08-18 – 01-08-19	Disbanded
Horsham St Faith	01-04-63	Airfield	12 (East Anglia) Sector	Unknown	01-04-63 – 01-04-68	Disbanded into 11 Group
Neatishead	29-05-63	Radar Station				
Horsham St Faith	12-07-46	Airfields	HQ Eastern Sector	Formed by combining Norfolk Sector and Lincolnshire Sector	12-07-46 – 00-07-58	Disbanded
Coltishall	13-01-47					
Horsham St Faith		Airfield	Norfolk Sector HQ	11 Group	08-08-45 – 12-07-46	Disbanded into Eastern Sector
Hove		3 Palmeria Square	60th (Training) Wing		22-07-18 – 14-09-18	Disbanded
Hurn		Airfield	124 (Rocket Projectile) Wing	83 Group, 22 Sector, 2nd TAF	12-05-44 – 16-06-44	Moved to France
Hurn		Airfield	143 (RCAF) (Fighter) Wing	83 Group, 22 Sector, 2nd TAF	12-05-44 – 17-06-44	Moved to France
Inverness		Bunchrew House	70 (Signals) Wing	60 Group, responsibility for RDF stations from Moray Firth to Shetlands	17-02-41 – 31-05-46	Disbanded at Tealing
Kenley		Airfield	Kenley Sector B	11 Group, Sector B, controlling fighter squadrons based at or flights detached to Kenley, Croydon (B1) and Redhill (B2)		
Keston	17-02-41	'Heathfield' Keston	75 (Signals) Wing	60 Group, responsibility for RDF stations in the area from the Thames to the Isle of Wight	17-02-41 – 01-11-46	Disbanded into 90 Group
Broadstairs	11-08-44	Broadstairs				
Kingsnorth	15-08-43	Airfields	15 (Fighter) Wing	83 Group with 122 and 125 Airfields	15-08-43 – 12-05-44	Redesignated 15 Sector
Newchurch	05-10-43					
Detling	12-10-43					
Ford	15-04-44					

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HQ		Location	Wing	Group and Units	Period	Notes
Kirton-in-Lindsey		Airfield	Kirton-in-Lindsey Sector M	12 Group, Sector M, initially controlling squadrons based at or flights detached to Kirton-in-Lindsey		
Lasham	12-05-44	Airfields	138 (Bomber) Wing	2 Group, 2nd TAF with 107, 305 and 613 Squadrons	12-05-44 – 18-11-44	Moved to Belgium
Hartford Bridge	29-10-45					
Leconfield	26-07-41	Airfields	151 (Fighter) Wing	unknown	26-07-41 – 00-08-41	Moved Russia
Hendon	00-08-41					
Leconfield	01-04-63	Airfield	11 (Northern) Sector	unknown	01-04-63 – 01-04-68	Disbanded into 11 Group
Boulmer	unknown					
Leeming		Airfield	63 (RCAF Base)	6 Group controlled squadrons at Leeming, Dishforth and Skipton-on-Swale	01-05-44 – 30-08-45	Disbanded
Lindholme/Church Fenton		Airfield	21 (Air Defence Missile) Wing	11 Group. Administered squadrons reforming with the Bloodhound Mk.I air-defence missile system. (118), Misson (94) and Carnaby (247) squadrons	01-05-60 – 31-08-63	Before disbandment, became 21 Surface to Air Missile Wing, then 21 (SAM) Servicing Wing
Lindholme		Airfield	11 Base	7 Group controlled squadrons at Lindholme, Blyton, Faldingworth and Sandtoft	01-07-43-04-11-44	Became 71 Base
Lindholme		Airfield	71 Base	7 Group controlled squadrons at Lindholme, Blyton, Sandtoft and Sturgate	05-11-44 – 15-11-45	Disbanded
Linton-on-Ouse		Airfield	62 (RCAF) Base	6 Group controlled squadrons at Linton on Ouse, East Moor and Tholthorpe	18-06-43 – unknown	Unknown
Linton-on-Ouse	01-12-50	Airfields	Northern Sector	Formed from Yorkshire Sector	01-12-50 – 21-11-57	Disbanded
Church Fenton	1956					
Little Sutton	15-10-17	The Oaks, Ledsham	37th (Training) Wing RFC	Western Group Command. Formed to control Shotwick and Hooton Park	15-10-17 – 09-04-19	Disbanded
Hooton Park	03-11-18	Aerodrome				
Liverpool		48 Ullet Road, Sefton Park	77 (Signals) Wing	60 Group, responsible for RDF stations from North Wales to the Clyde	17-02-41 – 15-05-44	Disbanded
London		Hotel Cecil?	16th (Home Defence) Wing	Controlled all Home Defence squadrons	25-06-16 – 28-07-16	Redesignated as HD Wing

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HQ		Location	Wing	Group and Units	Period	Notes
London	25-03-16	Carter's Hotel, Albemarle St,	18th (Training) Wing RFC	Controlled Joyce Green, Hounslow, Northolt, Brooklands and London Colney. Became part of Eastern Group Command	25-03-16 – 01-10-19	Disbanded at Ford Junction on 01-10-19
London	13-06-16	Hotel Cecil?				
London	03-03-17	Masons Yard, 19 Duke St				
London	18-07-17	23 Ryde St James				
London	29-03-19	128 Queen's Gate				
Ford Junction	07-08-19	Aerodrome				
London	29-10-17	Hotel Cecil?	47th (Home Defence) Wing RFC	6th Brigade, No1 Area (01-04-18) and South Eastern Area (08-05-18). Formed from South Midland Home Defence Wing controlling 38 and 51 Squadrons and 190-191 Depot Squadrons	29-10-17 – 13-06-19	Disbanded
Cambridge	10-11-17	Leighton House, Trumpington, Cambridge				
London	29-10-17	Hotel Cecil?	50th (Home Defence) Wing	6th Brigade. Formed from Southern Home Defence Wing controlling 37, 50 and 75 Squadrons and later 61, 143 and 198 (NT) Squadrons	29-10-17 – 22-05-19	Merged into 49th Wing
Chelmsford	25-03-18	'The Vineyards', Great Baddow, Chelmsford				
London	25-07-45	Whitehall Gardens, London	165 Wing	12 Group	25-07-45 – unknown	Redesignated as Tactical Reserve Planning Cell
Stanmore	05-08-59	Bentley Priory Stanmore				
London	00-10-59	back to Whitehall Gardens				
London		Hotel Cecil?	Southern Home Defence wing	Controlled Home Defence units protecting the south of England	01-09-17 – 29-10-17	Redesignated 50th Wing
Ludford Magna		Airfield	14 Base	1 Group controlled squadrons at Ludford Magna, Faldingworth and Wickenby	16-12-43 – 25-10-45	Disbanded
Luton Hoo	22-08-41	Luton Hoo House	34 Army Co-operation) Wing	Eastern Command, controlling Army Co-operation units in East Anglia. Became part of 12 Group on 01-06-43 as 34 Strategic Reconnaissance Wing attached to 2nd TAF	22-08-41 – 30-08-44	Moved to Belgium
Hartford Bridge	30-06-43	Airfield				
Northolt	08-04-44	Airfield				
Manchester	01-03-40	Fir Tree Farm Ringway	110 (Anti-Aircraft Co-operation) Wing	22 Group took over flying duties of 5 to 9 Anti-Aircraft Co-operation units	01-03-40 – 05-05-41	At Filton it disbanded 05-05-41 in 70 Group
RAF Ringway	unknown	Airfield				
Filton	03-05-40	Airfield				

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HQ		Location	Wing	Group and Units	Period	Notes
Manston		Aerodrome	57th (Training) Wing	Unknown	1918 – 02-07-18	Disbanded
Manston		Airfield	155 (General Reconnaissance) Wing	16 Group, controlling operations in the Straits of Dover	22-04-44 – 19-09-44	Disbanded
Marske		Aerodrome	8th Wing	Northern Command, Inland Area	18-10-19	Disbanded at RA F Depot Uxbridge 24-04-20
Marston Moor		Airfield	41 Base	4 Group controlled squadrons at Marston Moor, Acaster, Riccall and Rufforth	05-03-43 – 07-11-44	Renamed 74 Base
Marston Moor		Airfield	74 Base	7 Group controlled squadrons at Acaster, Marston Moor, Riccall, and Rufforth	17-11-44 – 10-06-45	Disbanded
Merston,	12-05-44	Airfields	145 (French) (Fighter) Wing	84 Group, 2nd TAF. Formed from 145 Airfield with 829, 340 and 341 Squadrons	12-05-44 – 18-08-44	Moved to France
Funtington	22-06-44					
Selsey	01-07-44					
Tangmere	06-08-44					
Middleton St George		Airfield	64 (RCAF) Base	6 Group - controlled squadrons at Croft and Middleton St George	01-05-44 – unknown	Unknown
Middle Wallop		Airfield	Middle Wallop Sector Y	11 Group until 18-07-40, then 10 Group, Sector Y initially controlling fighter squadrons based at or flights dispersed to Middle Wallop, Boscombe Down and Warmwell		
Milton	22-07-44	Milton Depot	57 (Maintenance) Wing	40 Group controlling 3, 7, 70, 73, 74, 208, 210, 211, 212, 214, 225, 232 and 238 MUs	22-07-44 – 15-01-47	Disbanded
Bicester	21-03-46	Brashfield House, Bicester				
Mildenhall		Airfield	32 Base	3 Group controlled squadrons at Mildenhall, Lakenheath, Methwold, Newmarket and Tuddenham	01-03-43 – 15-11-45	Disbanded
Millford Haven		Marine Aerodrome	77 (Operations) Wing	14 Group controlled 244, 245, and 255 Sqns and Bangor, Fishguard and Pembroke Marine Stations	08-08-18 – 01-11-18	Disbanded
Mountbatten		Cattewater Marine Aerodrome	2 (Plymouth) Wing	10 Group with 238 Squadron	15-05-19 – 00-04-20	Disbanded into 10 Group
Mount Batten		Marine Aerodrome	4 (Flying Boat) Wing	Controlled 204 and 230 Squadrons for service abroad	02-10-35 – 03-10-35	Moved to Alexandria

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HQ		Location	Wing	Group and Units	Period	Notes
Mount Batten	08-08-18	Cattewater Marine Aerodrome	72nd (Operations) Wing	9 Group, controlled 237, 238, 239, and 254 Squadrons	08-08-18 – 15-05-19	Disbanded at Penzance
Penzance	15-05-19	Marine Aerodrome				
Needs Oar Point	12-05-44	Airfields	146 (Fighter) Wing	84 Group, 2nd TAF. Formed from 146 Airfield with 193, 197, 257 and 266 Squadrons	12-05-44 – 07-07-44	Moved to France
Hurn	03-07-44					
Netheravon		Aerodrome	4th Wing RFC	5th Brigade with 1 and 7 Squadrons. Later controlled Netheravon, Filton, Beaulieu, Oxford and Rendcomb(e)	29-11-14 – 23-08-16	Became CFS and Netheravon Wing
Netheravon		Aerodrome	4th (Reserve) Wing	7 Group 01-04-18, controlled local units including 7, 8 and 24 Reserve Squadrons	10-01-17 – 15-05-19	Disbanded
Netheravon		Airfield	38 Wing	Army Co-op Command, 10 Group, then to HQ TAF	19-01-42 – 11-10-43	Redesignated as 38 Group
Netheravon and Maidstone		Aerodrome	64th (Naval) Wing	5 Group (presumed to have arrived from abroad)	22-04-18 – 1918	Disbanded
Nether Wallop	00-01-46	Rudlow Manor	HQ Southern Sector	unknown	00-01-46 – 00-11-57	Disbanded
Middle Wallop	00-05-46					
Sopley	01-09-47					
Box	00-11-50					
Newcastle		10 Osborne Villas, Jesmond	19th (Training) Wing, RFC	6th Brigade, Northern Group Command and 17th Group. Controlled Catterick, Cramlington, Montrose, Stirling and Turnhouse	01-05-16 – 25-03-19	Disbanded
Newcastle		Blakelaw	North Eastern Sector HQ	details unknown	1945 – 10-04-46	Disbanded
Newchurch	12-05-44	Airfields	150 (Fighter) Wing	83 Group, 2nd TAF. Formed from 150 Airfield with 3, 5,6 and 486 Squadrons	12-05-44 – 27-09-44	On 28-09-44 the unit became part of 11 Group, moving to Andrewsfield on 15-10-44 before disbanding on 08-03-45
Matlask	19-09-44					
Andrewsfield	15-10-44					

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HQ		Location	Wing	Group and Units	Period	Notes
New Romney	05-07-43	Airfield	16 (Mobile) Wing	83 Group with 121 and 124 Airfields	05-07-43 – 20-04-44	Disbanded at Hurn
Lydd	18-08-43					
Westhampnett	09-10-43					
Hurn	01-04-44					
North Luffenham		Airfield	151 (Air Defence Missile), 151 (Surface to Air Missile) Wing	12 Group to administer squadrons reforming with the Mk.I Bloodhound Air Defence missile system. at Woolfox Lodge (62 Squadron) and Warboys (151 Squadron)	01-10-59 – 30-09-64	Became 151 (SAM) Servicing Wing before disbanding
Northolt		Airfield	18 (Polish) Fighter Wing	Controlled 131, 133 Airfields and took over 135 Airfield.	00-12-43 – 12-05-44	Redesignated as 18 Fighter Sector
Northolt and Bradwell Bay		Airfields	111 (Transport) Wing	ADGB, controlled Staging Posts in Western Europe	04-09-44 – 00-04-45	Moved to Germany before disbanding 06-04-46
Northolt		Airfield	Northolt Sector	11 Group controlling fighter squadrons based or detached at Northolt, Luton, Gatwick and Heathrow		
North Coates	01-05-60	Airfields	148 (Air Defence Missile) Wing (later 148 Surface to Air Missile) Wing	Reformed in 11 Group to administer squadrons reforming with the Bloodhound Mk.I missile system. North Coates (264), Dunholme Lodge (141) and Woodhall Spa (222)	01-05-60 – 31-01-63	On 01-02-63 became 148 (SAM) Servicing Wing (11 Group) at Church Fenton until disbanded 31-05-64
Church Fenton	01-02-63					
North Luffenham		Airfield	73 Base	7 Group controlled squadrons at North Luffenham, Woolfox Lodge, Bottesford and Langar	01-11-44 – 01-08-45	
North Weald		Airfield	19 (Fighter) Wing	84 Group controlled 132 and 134 Airfield, took over 145 Airfield 20-04-44	00-12-43 – 12-05-44	Redesignated as 19 Fighter Sector
North Weald		Airfield	North Weald Sector E	11 Group, Sector E, controlling fighter squadrons based at or flights detached to North Weald and Stapleford (E1)		
North Weald	07-05-45	Airfield	128 (Reconnaissance) Wing	88 Group, formed to control all RAF units in Oslo area (excluding 88 Group squadrons) which included 331 and 332 Squadrons	07-05-45 – 15-05-45	Moved to Norway
Dyce	14-05-45					

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HQ		Location	Wing	Group and Units	Period	Notes
North Weald	07-05-45	Airfields	132 (Norwegian) Wing	Formed to control all RAF units in Kristiansund/South area	07-05-45 – 04-06-45	Moved to Norway
Turnhouse	20-05-45					
North Weald		Airfield	Fighter Sector HQ North Weald/Essex Sector	11 Group	01-08-45 – 15-06-46	Disbanded into Metropolitan Sector
North Weald	01-05-46	Airfield	HQ Metropolitan Sector	Absorbed Essex Sector and South-Eastern Sector	01-05-46 – 00-11-57	Disbanded
Trimley Heath	14-07-47	Radar Station				
Kelvedon Hatch	16-03-53	Radar Station				
North Weald	00-11-53	Airfield				
Northwood		HQ Coastal Command	301 (Transport Training) Wing	47 Group? Controlled 53, 59, 86, 206, 220, 304 and 311 Squadrons	25-05-45 – 01-10-45	Disbanded
Odiham		Airfield	50 (Army Co-operation) Wing	22 Group with 4, 13 and 53 Squadrons	11-01-37 – 13-09-39	France
Odiham	12-11-45	Airfields	120 (Transport) (RCAF) Wing	Controlled 435, 436 and 437 Squadrons	12-11-45 – 30-06-46	Disbanded
Down Ampney	12-11-45					
Odiham		Airfield	128 (Fighter) (RCAF) Wing	83 Group, controlling 400, 414, and 430 Squadrons	12-05-44 – 29-06-44	Moved to France and merged into 39 (R) Wing
Odiham		Airfield	130 (Reconnaissance) Wing	84 Group, 2nd TAF controlling 2, 4 and 208 Squadrons	12-05-44 – 07-07-44	Merged into 35 Wing
Pembrey		Airfield	Pembrey Sector	10 Group controlling fighter squadrons based at or flights dispersed to Pembrey		
Penzance		unknown	71st (Operations) Wing	9 Group controlled 234, 235, 236, 250 and 260 Squadrons with stations at Mullion, Newlyn, Padstow, Tresco and Westwood Ho!	08-08-18 – 15-05-19	Disbanded
Perton		Western Command HQ	Western Command	Unknown	00-08-41 – 28-07-43	Disbanded
Pocklington		Airfield	42 Base	4 Group controlled squadrons at Pocklington, Melbourne, Elvington and Full Sutton	05-03-43 – 01-09-45	Disbanded
Portreath		Airfield	153 (General Reconnaissance) Wing	19 Group formed to control operations locally in the English Channel during D-Day and beyond	15-04-44 – 14-09-44	Disbanded

Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)					
HQ	Location	Wing	Group and Units	Period	Notes
Predannack	Airfield	152 (General Reconnaissance) Wing	19 Group formed to control operations locally in the English Channel during D-Day and beyond	15-04-44 – 07-09-44	Disbanded
Preston	Dispersed Operations Block at Longley Lane Barton Hall	Western Sector HQ	Reformed on a non-operation basis	15-12-50 – 25-10-57	Disbanded
Radlett	Aldenham Lodge Hotel	80 (Signals) Wing	60 Group and 100 Group formed for radio counter measures work	07-10-40 – 24-09-45	Disbanded
Reigate	South Eastern Command HQ Beechwood House	35 (Army-Co-operation) Wing	Reformed out of 71 Group for Army South Eastern Command. Controlled army co-operation units in southern England. Acquired 123 Airfield, stations: Croydon, Detling, Gatwick, Hartford Bridge, Odiham and Penshurst	22-08-41 – 01-06-43	Became 35 Reconnaissance Wing at Odiham
Royston	Barkway	84 (Signals) Wing	60 Group with responsibility for UK ground navigation aids	01-05-43 – 01-09-44	Disbanded to reform as 60 Group Radar Navigational Aids Section Cambridge
St Eval	Airfield	St Eval Sector	10 Group, initially controlling fighter squadrons based at or flights dispersed to St Eval and Roborough		
Salisbury	2A Winchester Street	33rd (Training) Wing RFC	Southern Training Brigade controlled Lake Down, Boscombe Down and Stonehenge	30-08-17 – 15-05-19	Disbanded at Lakedown
Salisbury	Southern Command HQ Wilton	36 (Army Co-operation) Wing	Southern Command controlled army co-op units in the Salisbury Plain area and the West Country. Stations: Old Sarum, Andover, Odiham, Thruxton and Weston Zoyland. Joined 10 Group 01-06-43	15-08-41 – 16-07-43	Disbanded
Scampton	Airfield	15 Base	1 Group controlled squadrons at Scampton, Dunholme Lodge, Fiskerton, Hemswell	07-10-44 – 20-10-45	Disbanded
Scampton	Airfield	52 Base	5 Group controlled squadrons at Scampton, Dunholme Lodge and Fiskerton	10-05-43 – 07-10-44	Became 15 Base on transferring to 1 Group
Seaton Carew	The Gables	68th (Operations) Wing	Controlled 246, 252, 256 and 274 Squadrons. Stations at Ashington, New Haggerston, Redcar, Sea Houses, Seaton Carew and Tynemouth	11-07-18 – 01-09-19	Disbanded

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 <i>(contd)</i>						
HQ		Location	Wing	Group and Units	Period	Notes
Selsey	12-05-44	Airfields	135 (Fighter) Wing	84 Group, 18 Sector, 2nd TAF formed from 135 Airfield with 222, 349, and 485 Squadrons	12-05-44 – 22-08-44	Moved to France
Coolham	30-06-44					
Funtington	04-07-44					
Selsey	06-08-44					
Tangmere	19-08-44					
Shotwick		Aerodrome	10th Wing	16 Group details unknown	18-10-19 – 07-02-20	Disbanded
Silloth	21-04-41	Aerodrome	50 (Maintenance) Wing	41 Group controlled 12, 18, 22, 23, 44, 45, and 46 MUs and 8–11, 16, 19, 20, 26, 36, 39, and 43 Satellite Landing Grounds	21-04-41 – 21-11-42	Disbanded
Penrith	unknown					
Southampton		Balloon Depot	1 Balloon Barrage		02-06-40 – 24-06-40	Disbanded
South Carlton		Aerodrome	23rd (Training) Wing RFC	Northern Group Command (10-01-17), 12 Group (01-04-18) and 16 Group (?-03-19) controlled Scampton, South Carlton, Waddington and Doncaster.	13-11-16 – 31-05-19	Disbanded
Speke		Airfield	Speke Sector	9 Group, initially controlled fighter squadrons based at or Flights detached to Speke		
Sutton Coldfield		Balloon Depot	1 Balloon Barrage Wing		24-01-40 – 19-05-40	Moved to Le Havre
Stamford		Aerodrome	35th (Training) Wing RFC	Controlled Stamford and Easton-on-the-Hill	22-09-17 – 09-04-19	Disbanded into 3rd Group
Stamford			South Midland (HD) Wing	Details unknown	?- 3/17	Redesignated as 47th Wing
Stanmore		Bentley Priory	80 Wing	HQ Fighter Command - details unknown	01-08-53 – 15-03-57	Disbanded
Stockbridge		unknown	34th (Training) Wing RFC	Southern Training Brigade controlled Chattis Hill and Lopcombe Corner	08-09-17 – 12-10-18	Disbanded
Stradishall		Airfield	31 Base	3 Group controlled Chedburgh, Ridgewell, Wratting Common, Shepherds Grove, Birch, Gosfield and Matching	26-04-43 – 30-10-44	Became 73 Base
Strubby		Airfield	154 (General Reconnaissance) Wing	16 Group formed to control operations in local area during D-Day and beyond	15-04-44 – 07-09-44	Disbanded

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Swanage		Forres School Swanage	83 (Signals) Wing	60 Group - details unknown	19-08-42 – 00-07-43	Disbanded
Swanage		Forres School Swanage	88 Wing	60 Group - reformed for service overseas	06-08-42 – 18-11-42	Disbanded
Swinderby		Airfield	51 Base	5 Group controlled squadrons at Swinderby, Barkston Heath, Syerston, Wigsley and Winthorpe	05-03-43 – 02-11-44	Became 75 Base 03-11-44
Swinderby		Airfield	75 Base	7 Group controlled squadrons at Swinderby, Wigsley and Winthorpe	03-11-44 – 01-10-45	Disbanded
Syerston		Airfield	56 Base	5 Group controlled Fulbeck	01-10-44 – 25-04-45	Disbanded
Tadcaster	18-10-19	Aerodrome	7th Wing	16 Group, came under Northern Area 08-02-20, Inland Area 01-04-20	18-10-19 – 08-02-20	Disbanded at Uxbridge
South Carlton	08-02-20					
Uxbridge	unknown					
Tangmere		Airfield	23 (Fighter) Wing	84 Group controlled 145 and 146 Airfields, acquired 135 Airfield 01-03-44	20-01-44 – 20-4-44	Disbanded
Tangmere		Airfield	126 (Fighter) (RCAF) Wing	83 Group, 15 Sector, 2nd TAF formed from 126 Airfield with 401, 411 and 412 Squadrons	12-05-44 – 09-06-44	Moved to France
Tangmere		Airfield	127 (Fighter) (RCAF) Wing	83 Group, 15 Sector, 2nd TAF formed from 127 Airfield with 403, 416 and 421 Squadrons	12-05-44 – 14-06-44	Moved to France
Tangmere		Airfield	Tangmere Sector A	11 Group, Sector A, initially controlling fighter squadrons based or flights detached to Tangmere, Ford and Westhampnett (A1)		
Teddington	12-02-45	Bushy Park Teddington	103 (Disarmament) Wing	Fighter Command formed to control disarmament units	12-02-45 – 01-09-45	Joined BAFO and then disbanded 30-09-46
Harrow	01-04-45	Harrow				
London	18-07-45	42/43 Princess Gdns, Kensington London				
Tempsford		Airfield	107 (Special Duties) Wing	unknown	26-06-43 – 07-08-43	Disbanded

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Ternhill	01-06-17	Aerodromes	29th (Training) Wing RFC	Western Group Command	01-06-17 – 09-04-19	Disbanded
Shawbury	05-08-17					
Ternhill		Airfield	Ternhill Sector established in Sector L	9 Group controlled squadrons based at or flights dispersed to Ternhill		
Thorney Island	12-05-44	Airfield	123 (Rocket Projectile) Wing	83 Group, 2nd TAF formed from 123 Airfield with 198 and 609 Squadrons	12-05-44 – 01-07-44	Moved to France
Funtington	17-06-44					
Thorney Island	12-05-44	Airfields	136 (Fighter) Wing	84 Group, 2nd TAF formed from 136 Airfield with 164 and 183 Squadrons	12-05-44 – 19-07-44	Moved to France
Funtington	17-06-44					
Hurn	22-06-44					
Thruxton		Upper Croft	36th (Training) Wing RFC	7 Group, controlled Boscombe Down, Andover and Upavon	08-10-17 – 23-06-18	Disbanded
Topcliffe		Airfield	61 (RCAF) Base	6 Group controlled squadrons at Topcliffe, Dalton, Dishforth and Wombledon	25-03-43 – 15-09-43	Became 76 Base
Topcliffe		Airfield	76 (RCAF) Base	7 Group controlled squadrons at Dalton, Dishforth, Topcliffe and Wombledon	09-11-44 – 01-09-45	Disbanded
Turnhouse		Airfield	129 (RAF) Wing	88 Group, to control RAF units in Stavanger area	07-05-45 – 30-05-45	Moved to Norway
Turnhouse		Airfield	130 Wing	88 Group controlled all RAF units in Trondelag area, including 129 and 165 Squadrons	07-05-45 – 05-06-45	Moved to Norway
Turnhouse		Airfield	Midlothian Sector HQ	13 Group details unknown	1945 – 28-04-46	
Turnhouse		Airfield	Turnhouse Sector	13 Group initially controlling fighter squadrons based at or flights detached to Turnhouse, Drem and Prestwick		
Upper Heyford		Airfield	70 (Bomber) Wing	Air Component BEF with 18 and 57 Squadrons	01-09-39 – 22-09-39	Moved to France
Usworth		Airfield	Usworth Sector	13 Group, initially controlling fighter squadron based or Flights detached to Usworth, Acklington		

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 <i>(contd)</i>						
HQ		Location	Wing	Group and Units	Period	Notes
Waddington		Aerodrome	27th (Training) Wing RFC	12 Group formed from the 23rd Wing to control Waddington and later Hucknall	05-05-17 – 01-04-19	Disbanded to 12 Group
Waddington		Airfield	53 Base	5 Group controlled Bardney and Skellingthorpe	14-11-43 – 01-11-45	Disbanded
Warsash		unknown	75th (Operations) Wing	10 Group, controlled 241, 242, 243 and 253 Squadrons	08-08-18 15-05-19	Disbanded
Waterbeach		Airfield	33 Base	3 Group controlling squadrons at Waterbeach and Witchford	25-08-43 – 01-09-45	Disbanded
Wattisham		Airfield	83 (Bomber) Wing	2nd Echelon Advanced Air Striking Force with 139 and 114 Squadrons	00-08-39 – unknown	Moved to France
Watton		Airfield	24 (Air Defence Missile) Wing	12 Group, formed to administer squadrons reforming with Bloodhound Mk.I anti-aircraft missile. Watton (263), Marham (242) and Rattlesden (266)	01-04-59 – 31-08-63	Became 24 Surface to Air Missile) Wing, then 24 (SAM) Servicing Wing before disbanding
Watton	22-08-39	Airfield	79 (Bomber) Wing	2nd Echelon Advanced Air Striking Force formed from SHQ Watton with 21 and 82 Squadrons	22-08-39 – unknown	unknown disbanded
Benson	unknown					
West Malling	12-05-44	Airfields	148 (Night-Fighter) Wing	85 Group, 2nd TAF formed from 148 Airfield initially with 29, 91 and 409 Squadrons	12-05-44 – 24-08-44	Moved to France
Hunsdon	19-06-44					
Westhampnett		Airfield	129 (Fighter-Bomber) Wing	83 Group, 15 Sector formed from 129 Airfield with 184 Squadron	12-05-44 – 28-06-44	Moved to France where it disbanded 12-07-44
West Raynham		Airfield	81 (Bomber) Wing	2nd Echelon Advanced Air Striking Force with 90 and 101 Squadrons	00-08-39 – 18-09-39	Disbanded
West Raynham		Airfield	Night Fighter Wing	Central Fighter Establishment	1949 – 00-07-50	Became All-Weather Wing
Wick		Airfield	Wick Sector	13 Group initially controlling fighter squadrons based or Flights detached to Wick and Castletown		
Wittering		Airfield	Wittering Sector K	12 Group, Sector K (formally Sector J) controlled fighter squadrons based at or flights detached to Wittering and Collyweston (K1)		

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 (<i>contd</i>)						
HQ		Location	Wing	Group and Units	Period	Notes
Woodford Green	29-10-17	Unknown	49th (Home Defence) Wing	6th Brigade formed from Eastern Home Defence Wing with 39, 44, 61, 78 and 141 Squadrons	29-10-17 – 13-06-19	Disbanded
Upminster	Unknown	Upminster Hall				
Great Baddow	22-09-19	The Vineyards Great Baddow				
Worcester	02-06-41	Municipal Homes Tallow Hill Worcester and Witcombe	81 (Signals) Wing	26 Group – details unknown	02-06-41 – 30-04-46	
Great Witcombe	27-03-43					
Wyton	29-06-16	Aerodrome	24th Training Wing RFC	Northern Group Command (10-01-17) and 12th Group (00-03-19). Formed to control Harlaxton and Spitalgate	25-09-16 – 08-04-19	Disbanded to Northern Group Command
Spitalgate	24-03-17	Aerodrome				
Grantham	00-10-18	Mille House ? Grantham				
Wyton	01-05-17	Aerodrome	26th (Training) Wing RFC	Controlled Wyton, Thetford and Harling Road	01-05-17 – 04-04-19	Disbanded
Ely	00-02-18	Ely St Mary's				
Cambridge	00-05-18	unknown				
Wyton	21-05-40	Airfields	70 (Bomber) Wing	Air Component British Expeditionary Force with 18 and 157 Squadrons	21-05-40 – 01-07-40	Redesignated as Gatwick SHQ
Gatwick	28-06-40					
Wyton		Airfield	82 (Bomber) Wing	2nd Echelon Advanced Air Striking Force with 114 and 139 Squadrons	00-08-39 – unknown	unknown disbanded
Yatesbury		Airfield	5 Signals Wing	Formed from Air Information Centre of Air Information Wing for establishing RDF stations in France	04-06-40 – 16-06-40	Disbanded
Yatesbury		No.1 Airfield	1(Yatesbury) Wing	Formed from 28th Wing to control No.1 Airfield Yatesbury	15-05-19 – unknown	Disbanded
Yatesbury		Aerodrome	28th (Training) Wing RFC	7 Group (01-04-18), formed out of 21st Wing to control units at Yatesbury	15-05-17 – ?	Became 1 (Yatesbury) Training Wing before disbanding

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Headquarter Locations of RAF Bases, Sectors and Wings 1914–2000 <i>(contd)</i>						
HQ		Location	Wing	Group and Units	Period	Notes
York		Main Building Northern Command HQ, Fulford Road	33 (Army Co-op) Wing	Formed for Army Yorkshire Command to control army co-operation units in Yorkshire based at Catterick, Church Fenton, York, Dishforth, Doncaster, Firbeck, Ouston and Woolsington. Joined 12 Group on 01-06-43	15-08-41 – 01-07-43	Disbanded
York		Burnholme, Heworth	46th (Home Defence) Wing RFC	17 Group, 24th Group, formed from Northern Home Defence Wing with 36, 76 and 77 Squadrons	29-10-17 – 06-03-19	Disbanded
York		unknown	Northern Home Defence Wing	Controlled Home Defence units protecting the north of England and Scotland	01-09-17 – 29-10-17	Became 46th Wing
Zeals	12-05-44	Airfields	147 (Night-Fighter) Wing	85 Group, 2nd TAF, formed from 147 Airfield initially with 488 and 605 Squadrons	12-05-44 – 00-11-44	At Hunsdon became part of ADGB, moved to Belgium
Hunsdon	29-06-44					

Table 19 – Headquarter Locations of Numbered Airfields

121 Airfield HQ	83 Group. Formed at Wrexham. Other stations are: Middle Wallop 28-02-43, Membury 08-03-43, Middle Wallop 13-03-43, Fairlop 05-04-43, Selsey 31-05-43, Lydd 01-07-43, Attlebridge 07-08-43, Westhampnett 09-10-43, Holmsley South 01-04-44. Wings: 16 Wing 05-07-43	22-02-43 – 11-05-44	Became 121 Wing 12-05-44
122 Airfield HQ	83 Group. Formed at Zeals. Other stations are: Chilbolton 25-02-43, Zeals 13-03-43, Eastchurch 04-04-43, Bognor 01-06-43, Kingsnorth 01-07-43, Gravesend 20-10-43, Ford 15-04-44, Gravesend 19-04-44 and Funtington 29-04-44. Wings: 15 Wing 01-08-43	15-02-43 – 11-05-44	Became 122 Wing 12-05-44
123 Airfield HQ	Formed at Stoney Cross. Other stations are: Gatwick 07-04-43, Odiham 23-06-43, Hutton Cranswick 20-09-43, Huggate 10-10-43, Thruxton 15-10-43, Sawbridgeworth 12-11-43, Manston 27-02-44, Thorney Island 01-04-44. Wings: 35 Wing 01-04-43, 20 Wing 10-03-44	01-04-43 – 11-05-44	Became 123 Wing 12-05-44
124 Airfield HQ	83 Group. Formed at Lasham. Other stations are: Appledram 02-06-43, New Romney 02-07-43 Merston 09-10-43, Odiham 31-12-43, Merston 13-01-44, Hurn 01-04-44. Wings: 16 Wing 05-07-43 and 22 Wing 16-04-44	01-04-43 – 11-05-44	Became 124 Wing 12-05-44
125 Airfield HQ	83 Group. Formed at Gravesend. Other stations are: Newchurch 02-07-43, Detling 12-10-43, Ford 04-05-44. Wings: 15 Wing 01-08-43	24-06-43 – 11-05-44	Became 125 Wing 12-05-44
126 Airfield HQ	Formed at Redhill. Other stations are: Staplehurst 06-08-43, Biggin Hill 13-10-43, Tangmere 15-04-44. Wings: 17 (RCAF) Wing 04-07-43	04-07-43 – 11-05-44	Became 126 Wing 12-05-44
127 Airfield HQ	Formed from Kenley Wing at Kenley. Other Stations are: Lashenden 06-08-43, Headcorn 20-08-43. Kenley 14-10-43, Tangmere 17-04-44. Wings: 17 (RCAF) Wing	04-07-43 – 11-05-44	Became 127 Wing 12-05-44
128 Airfield HQ	128 Airfield formed at Dunsfold. Other stations are: Woodchurch 28-07-43, Redhill 15-10-43, Odiham 19-02-44. Wings: 39R 04-07-43	04-07-43 – 11-05-44	Became 128 Wing 12-05-44
129 Airfield HQ	Formed at Gatwick. Other stations are: Ashford 13-08-43, Gatwick 15-10-43, Odiham 02-04-44, Westhampnett 22-04-44. Wings: 39R 04-07-43 and 15 Wing 20-04-44	04-07-43 – 11-05-44	Became 129 Wing 12-05-44
130 Airfield HQ	Formed at Gravesend. Other stations are: Odiham 07-08-43, North Weald 15-11-43, Sawbridgeworth 29-02-44, Gatwick 04-04-44. Wings: 35 Wing 10-07-43	10-07-43 – 11-05-44	Became 130 Wing 12-05-44
131 Airfield HQ (Polish)	Formed at Northolt. Other stations are: Deanland 01-04-44, Chailey 26-04-44. Wings: 18 Wing 04-10-43	04-10-43 – 11-05-44	Became 131 Wing 12-05-44
132 Airfield HQ (Norwegian)	84 Group. Formed at North Weald. Other stations are: Bognor 31-03-44. Wings: 19 Wing 00-04-44	01-11-43 – 11-05-44	Became 132 Wing 12-05-44
133 Airfield HQ (Polish)	Formed from 1 Polish Wing at Heston. Other stations are: Coolham 01-04-44. Wings: 18 Wing 01-11-43	01-11-43 – 11-05-44	Became 133 Wing 12-05-44
134 Airfield HQ (Czech)	84 Group. Formed at Ibsley. Other stations are: Mendlesham 18-02-44 and Appledram 03-04-44. Wings: 19 Wing 00-04-44	08-11-44 – 11-05-44	Became 134 Wing 12-05-44

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Headquarter Locations of Numbered Airfields – (contd)			
135 Airfield HQ	Formed at Hornchurch. Other stations are: Matching Green 00-02-44, Hornchurch 10-03-44, Selsey 11-04-44. Wings: 20 Wing 15-11-43 and 19 Wing 20-04-44	15-11-43 – 11-05-44	Became 135 Wing 12-05-44
136 Airfield HQ	84 Group. Formed at Fairlop. Other stations are: Thorney Island. 06-4-44. Wings: 20 Wing 01-01-44	22-11-43 – 11-05-44	Became 136 Wing 12-05-44
137 Airfield HQ	2 Group. Formed at Hartford Bridge. Other stations are: none. Wings: unknown	14-11-43 – 11-05-44	Became 137 Wing 12-05-44
138 Airfield HQ	2 Group. Formed at Lasham. Other stations are: none. Wings: unknown	10-11-43 – 11-05-44	Became 138 Wing 12-05-44
139 Airfield HQ	2 Group. Formed at Dunsfold. Other stations are: none. Wings: unknown	17-11-43 – 11-05-44	Became 139 Wing 12-05-44
140 Airfield HQ	2 Group. Formed at Sculthorpe. Other stations are: Hunsdon 26-12-43, Gravesend 17-04-44. Wings: unknown	01-12-43 – 11-05-44	Became 140 Wing 12-05-44
141 Airfield HQ	85 Group. Formed at Church Fenton. Other stations are: Hartford Bridge 05-05-44. Wings: unknown	01-01-44 – 11-05-44	Became 141 Wing 12-05-44
142 Airfield HQ	85 Group. Formed at Scorton. Other stations are: Horne 28-04-44. Wings: unknown	01-01-44 – 11-05-44	Became 142 Wing 12-05-44
143 Airfield HQ (RCAF)	83 Group. Formed at Ayr. Other stations are: Hurn 18-03-44, Funtington 02-04-44, Hurn 20-04-44. Wings: 22 Wing 20-04-44	10-01-44 – 11-05-44	Became 143 Wing 12-05-44
144 Airfield HQ (RCAF)	83 Group. Formed at Digby. Other stations are: Holmsley South 14-03-44, Westhampnett 01-04-44 and Funtington 21-04-44. Wings: 22 Wing 01-02-44 and 17 Wing 20-04-44	01-02-44 – 11-05-44	Became 144 Wing 12-05-44
145 Airfield HQ (French)	10 Group. Formed at Perranporth. Other stations are: Merston 14-04-44. Wings: 23 Wing 01-02-44 and 19 Wing 20-04-44. Groups: 10 Group 01-02-44 and 84 Group 14-04-44	01-02-44 – 11-05-44	Became 145 Wing 12-05-44
146 Airfield HQ	11 Group. Formed at Tangmere. Other stations are: Beaulieu 00-02-44, Needs Oar Point 10-04-44. Wings: 23 Wing 31-01-44 and 20 Wing 20-04-44	31-01-44 – 11-05-44	Became 146 Wing 12-05-44
147 Airfield HQ	12 Group. Formed at Acklington. Other stations are: Zeals 11-05-44. Wings: 24 Wing 16-02-44	16-02-44 – 11-05-44	Became 147 Wing 12-05-44
148 Airfield HQ	ADGB. Formed at Drem. Other stations are: West Malling 06-05-44. Wings: 24 Wing 23-02-44. Groups: ADGB 23-02-44 and 85 Group 10-03-44	23-02-44 – 11-05-44	Became 148 Wing 12-05-44
149 Airfield HQ	85 Group. Formed at Castle Camps. Other stations are: Deanland 04-04-44. Wings: 25 Wing 01-03-44	01-03-44 – 11-05-44	Became 149 Wing 12-05-44
150 Airfield HQ	83 Group. Formed at Bradwell Bay. Other stations are: Newchurch 28-04-44. Wings: 25 Wing 08-04-44	08-03-44 – 11-05-44	Became 150 Wing 12-05-44

Table 20 – Headquarter Locations of Initial Training Wings		
ITW No.	HQ	Location
2	Cambridge	
3	St Leonards on Sea	
4	Bexhill Paignton	Hydro Hotel
5	Hastings	
5	Torquay	Grand Hotel
7	Newquay	
8	Newquay	Beach view and Edgecliffe Hotels
9	Stratford on Avon	
10	Scarborough	
11	Scarborough	Prince of Wales Hotel
14	Bridlington	
14	St Leonards	
16	Whitley Bay	
17	Scarborough	College
18	Bridgnorth	
20	Bridlington	
21	Torquay	Babbacombe HQ at the Norcliffe Hotel, the Sefton, Oswalds, Trecarn, Foxlands and Palermo Hotels
23	Filey	
23	Stormy Down	
50	Bridgnorth	
70	Bridlington	
81	Bridgnorth	

Table 21 – Royal Observer Group Headquarters

This table covers unit HQs from formation to closure.

Group	HQ Location	From	To	Notes
(Royal) Observer Corps	Hillingdon House	1925	1938	
	Bentley Priory	1938	1992	Disbanded
Pre 1953 Area Organisation				
Midland Area	RAF Grantham	1938	1940	
	Mostyn Lodge, Grantham	1940	1942	
	RAF Watnall	1942	1953	Disbanded to new Eastern Area, and reformed Northern Area
North Western Area	Barton Hall, Preston	1941	1953	Disbanded into Western Area
Northern Area	RAF Hucknall, Notts.	1935	1938	
	RAF Catterick	1938	1943	Merged with Midland Area
Southern Area	Bentley Priory	1935	1936	
	RAF Uxbridge	1936	1953	Disbanded in to new Metropolitan Area
Western Area	Rudloe Manor	1937	1953	Formed by absorbing part of Southern Area. Disbanded into new Southern
Post 1953 Area Organisation				
Eastern Area	RAF Horsham St Faith	1953	1963	Formed from Midland Area
	RAF Old Catton	1963	1966	Disbanded. Into new Midland Area
Metropolitan Area	RAF Uxbridge	1953	1972	Was Southern Area
	Horsham	1972	1992	Disbanded
Midland Area	RAF Spitalgate	1966	1976	Reformed absorbing Eastern and Northern Area
	Fiskerton, Lincs.	1976	1992	Disbanded to new Eastern Area, and reformed Northern Area
Northern Area	Shelley House, Acomb, York	1953	1963	Reformed absorbing part of old Midland Area
	31 Priory Street, York	1963	1966	Disbanded to new Midland Area
Southern Area	RAF Rudloe Manor, Corsham	1953	1992	Reformed from old Western Area
Western Area	Barton Hall, Preston	1953	1966	
	Longley Lane, Goosnargh, Preston	1966	1992	Disbanded

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Table 22 – Royal Observer Corps Groups including associated GCI stations						
ROC Group	Location	From	To	Group	GCI Station	Notes
Bedford	GPO Exchange	1935	1943	12	Comberton and Langtoft	
	Days Lane, Biddenham	1943	1992	12 / 7		
Bristol	Little King St	1937	1943	23	Sopley	
	Worcester Terrace	1943	1945	23		
	Kings Square Avenue	1945	1958	23 / 12		
	Lansdown (Bath)	1958	1992	12		
Bromley / Beckenham	Church House, Bromley	1938	1945	19	Wartling	Premises retained as Training Centre to (PraTCt) 1968
	Dura Den, Park Place, Beckenham	1945	1960	19 / 1		
Bury St Edmunds	The Guildhall	1939	1953	14	Trimley Heath	Dispersed to Bedford, Colchester, Norwich. PRaTCt 1968
Cambridge	GPO	1935	1943	15	Langtoft	Dispersed to Bedford, Lincoln PraTCt 1965
	Meadowfields, Newmarket Road	1943	1953	15		
Carlisle	Huntingdons Funeral Companies underground stables, West Walls	1939	1941	32	none	Dispersed to Ayr, Durham, Lancaster Reformed on closure of Lancaster
	10 Norfolk Road	1941	1954	32 / 22		
	RAF Carlisle, No.14 MU	1962	1992	22		
Colchester	GPO, High Street	1926	1927	18	Trimley Heath	
	Corn Exchange	1927	1931	18		
	GPO, High Street	1931	1943	18		
	Errington Lodge, 22 Lexden Road	1943	1992	18 / 4		

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Royal Observer Corps Groups including associated GCI stations – (contd)						
ROC Group	Location	From	To	Group	GCI Station	Notes
Coventry / Rugby	GPO, Hertford Street	1938	1941	5	Comberton and Langtoft	
	<i>Broadwater</i> , Earlsdon Avenue	1941	1963	5 / 8		
	Lawford Heath Lane, Rugby	1963	1992	8		
Derby	GPO	1937	1942	8	Hack Green	PraTCt 1968
	<i>Highfields</i> , The Broadway	1942	1961	8 / 13		
Durham	GPO, Providence Row	1937	1951	30	Northstead and Seaton Snook	
	The Sands, Wearside Drive	1951	1992	30 / 23		
Exeter	<i>Speranza</i> , GPO High Street	1940	1942	21	Exminster	
	<i>Barnfield</i> , Southernhay East	1942	1947	21		
	GCI Station RAF Exminster	1947	1947	21		
	Sector Ops Room, Poltimore Park	1961	1992	21 / 10		
Gloucester	GPO, George Street	1937	1942	24	Comberton	Became part of Bristol Group
	Northgate Mansions	1942	1953	24		
Horsham	GPO, The Carfax	1925	1929	2	Durrington	
	<i>The Lindens</i> , 11 North Street	1929	1938	2		
	TA Drill Hall, Denne Road	1938	1992	2		
Lancaster	Lancaster Castle	1939	1942	29	St Annes	Became part of Preston Group. PraTCt 1967
	Bank Chambers, Church Street	1942	1945	29		
	Lancaster Castle	1945	1956	29 / 21		
	Willow Lane	1956	1961	21		

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Royal Observer Corps Groups including associated GCI stations – (contd)						
ROC Group	Location	From	To	Group	GCI Station	Notes
Leeds	Vicar Lane	1938	1939	8	Roecliffe and Staythorpe	Became part of York Group
	GPO	1939	1942	8		
	Grove House	1942	1964	8 / 18		
	Victoria Avenue Industrial Estate, Yeadon	1964	1968	18		
Lincoln	GPO	1935	1938	11	Orby	
	St Peter-at-Arches	1938	1942	11		
	St Martins Hall	1942	1947	11		
	RAF Waddington	1947	1960	11 / 15		
	Reepham Road, Fiskerton	1960	1992	15		
Maidstone	GPO	1925	1929	1	Sandwich	
	Corn exchange Buildings	1929	1942	1		
	<i>Fairlawns</i> , (Ashmore House) 57 London Road	1942	1992	1		
Manchester	GPO, Spring Gardens	1937	1942	7	St Annes and Hack Green	Became part of Preston Group. PraTCt 1970
	Danebury, Slade Lane, Levenshulme	1942	1961	7 / 19		
Norwich	GPO, Dove Street	1934	1940	16	Neatishead	
	GPO, St Andrews	1940	1942	16		
	<i>Fairfield</i> , Lime Tree Road	1942	1947	16		
	RAF Old Catton, Chartwell Road	1947	1992	16 / 6		

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Royal Observer Corps Groups including associated GCI stations – (contd)						
ROC Group	Location	From	To	Group	GCI Station	Notes
Oxford	GPO	1935	1941	4	Cricklade and Easthill	
	New Bodleian Library	1941	1945	4		
	TA Drill Hall, North Way	1945	1949	4		
	Woodstock Road, Wolvercote	1949	1965	4 / 3		
	Cowley Barracks, James Wolfe Road, Hollow Way	1965	1992	3		
Preston	Longley Lane, Goosnargh	1962	1992	21	St Annes	Formed after closure of Lancaster and Manchester Groups
Shrewsbury	Shire Hall (cellars)	1938	1943	27	Comberton and Hack Green	
	London Road	1943	1962	27 / 16		
	Hollywell Street	1962	1992	16		
Truro	GPO	1940	1942	20	Treleaver	
	Masonic Hall, Union Place	1942	1949	20		
	Fairmantle Street School	1949	1962	20 / 11		
	Albert Place, Daniel Street	1962	1973	11		
Watford	GPO, Market Street	1931	1943	17	Chenies	Dispersed to Bedford, Horsham, Oxford. PraTCt 1973
	Cassiobury Drive	1943	1968	17 / 5		

UK MILITARY COMMAND AND CONTROL ORGANISATION.

Royal Observer Corps Groups including associated GCI stations – (contd)						
ROC Group	Location	From	To	Group	GCI Station	Notes
Winchester	Blue Triangle Club, Parchment Street	1926	1929	3	Sopley	
	GPO, Brook Street / Market Street	1929	1940	3		
	<i>Northgate House</i> , 28 Jewry Street	1940	1943	3		
	Abbots Road / Worthy Road junction	1943	1992	3 / 14		
Yeovil	Princess Street	1938	1941	22	Hope Cove	
	53 Southwoods, Hendford Hill	1941	1992	22 / 9		
York	GPO, Lendall	1937	1943	9 and 10	Seaton Snook and Patrinton	
	Knavesmire (prefabs)	1943	1961	9 and 20		
	Knavesmire (prefabs)	1943	1953	10		
	Shelly House, Acomb Road, Acomb	1953	1992	20		

PraTCt: Premises retained as Training Centre to -

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Sources: TNA Files

Operations Record Books (ORBs) for Commands are located in category AIR 24

Command	Piece Nos. - AIR24 / xxxx
Air Support	2950–2962, 3062–3065
Bomber	1714–16, 1719–25, 1727–1734, 1736–37, 2156–58, 2554, 2635–46, 2683–89, 2722–33, 2775–84, 2846–58, 2997, 3066–67
Coastal	359–380, 2192–93, 2379, 2647–48, 2734–35, 2786–88, 2860–70, 3049–50,
Combined Operations	761
Ferry	505
Fighter	1767–68, 1770–73, 1775–91, 2089–2115, 2383–84, 2492–93, 2116, 2041–52
Maintenance	891, 892, 1913–1915, 2231, 2580, 2662, 2669, 2700, 2746–47, 2813–16, 2892–2903, 3068–73
RAF Support	3235, 3236, 3209–3216
Reserve	1268, 2011–17
SHQ AEF	1676
Signals	2583, 2669–73, 2710–2714, 2757–2760, 2828–2834, 2904–2914, 3038
Strike	2915–27, 3185, 3039–41, 3118–3139, 3184
Support	3140–3149
Training	1592, 2936–47, 3150–70
Flying Training	654–660, 2132–33, 2415, 2660–61, 2698–98, 2743–45, 2808–12, 2882–90
Technical Training	1563–1567, 2028–34, 2210–11, 2597, 2674–76, 2715–16, 2761–63, 2835–38, 2930–35
Transport	1601–11, 2035–40, 2144–45, 2677–78, 2717–20, 2764–2767 2839–45 3042–48, 3171

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AIR 1/2311/221/20	Final report of the Committee on Admin. and Command of the RFC	1916
AIR 2/111	Formation of Southern Area	1919–20
AIR 2/220	Renaming, to "Adastral House", of AM Buildings in Kingsway.	1919–1922
AIR 2/113	Formation of Northern Area	1919–20
AIR 2/335	Formation of groups for the Fighting Area Command	1928–31
AIR 2/355	Reorganisation of RAF Headquarters Commands and Formations.	1929–32
AIR 2/651	Alteration to GPO fittings in Air Defence Operations Rooms.	1932–43
AIR 2/799	Design of operations rooms at air stations (including urgent order apparatus).	1927–42
AIR 2/1224	Location and siting of fighter groups operation rooms.	1928–38
AIR 2/1487–9	Fighting Services: removal of AM from Kingsway to Whitehall.	1930–33
AIR 2/1872	Bomber Command: Selection of site for HQ	1935–38
AIR 2/1600	Fighter Command – ADGB: Command organisation	1935
AIR 2/1935	Coastal Command: HQs and Coastal Group HQs: Siting	1936–39
AIR 2/2097	Bomber Command: Command HQ: War establishment	1936–40
AIR 2/2098	Bomber Command: Command HQ: War establishment	1940–42
AIR 2/2101	Bomber Command: Group HQs: War establishment	1937–41
AIR 2/2119	Fighter Command: Fighter stations: War establishment	1936–41
AIR 2/2783	Training Command: Higher Command organisation	1936–38
AIR 2/2784	Reorganisation of Home Commands	1935
AIR 2/2789	Staff organisation of Group HQ: Home Commands	1936–40
AIR 2/2993	Growth and progress of operations rooms	1938–1939
AIR 2/2997	New underground ops block, Fighter Command, Stanmore:	1938–1944

AIR 2/3120	Fighter Command: War establishment	1939–43
AIR 2/3127	Strength of fighter squadrons necessary for defence of Great Britain	1939
AIR 2/3290	Formation of the Reserve Command	1938–39
AIR 2/3438	Coastal Command: Coastal Command HQ: Selection of site	1938–39
AIR 2/3446	Balloon Command: Balloon Command: Formation	1938
AIR 2/3545	Establishment of operations rooms: Fighter Command	1938–41
AIR 2/3536	HQ Coastal Command: Operations block	1939–45
AIR 2/3582	Area Combined HQ, Pitreavie Castle, Rosyth: operations block	1939–42
AIR 2/3650	Central Unit, Whitehall: formation and war organisation	1939
AIR 2/3666	Fighter Command: HQ. Organisation	1939–41
AIR 2/3667	Coastal Command: HQ. Organisation	1939–41
AIR 2/3668	Training Command: HQ Organisation	1939
AIR 2/3920	Balloon Command: Balloon Command: Formation	1938–40
AIR 2/4118	Balloon Command: Nucleus Defence Scheme	1939
AIR 2/4516	Training and Reserve Commands: Reorganisation	1940–41
AIR 2/4565	Air Ministry buildings in Kingsway and vicinity: defence	1940–41
AIR 2/7188	Army Co-op Command: Army requirements	1940
AIR 2/7359	Army Co-op Command: Formation	1940–42
AIR 2/8037	Bomber Command: Expansion: Formation of squadrons and OTUs	1940–42
AIR 2/8069	Bomber Command: Expansion	1940–45
AIR 2/8320	Home Commands: Organisation	1944–46
AIR 2/8875	Home Commands: Organisation consequent on exp. scheme `C'	1935–38
AIR 2/8876	Home Commands: Organisation consequent on exp. scheme `C'	1938–42
AIR 2/8877	Home Commands: Organisation on approved expansion of the RAF	1935–36
AIR 2/10641	Air Ministry Headquarters strength	1949
AIR 2/10643	New Whitehall building, Whitehall Gardens, SW1: first section	1948–52

AIR 2/10727	Air Ministry Headquarters strength	1950
AIR 2/10741	Transfer of Auxiliary Squadrons from Reserve to Fighter Command	1949–51
AIR 2/10853	AM HQ accommodation: relinquishment of space in Whitehall	1945–50
AIR 2/10941	Move of Air Ministry staff into the Whitehall Gardens building	1945–51
AIR 2/12208	Transfer of AM offices from Kingsway to Theobalds Road	1953–57
AIR 2/12313	Provision of new building in Whitehall Gardens	1948–59
AIR 2/12318	Air Ministry: Accommodation in Kingsway, London:	1954–58
AIR 2/13009	Group Headquarters acquisition of Pitreavie Castle	1938–52
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AIR 2/13524	Home Command: Disbandment	1957–59
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AIR 2/13998	RAF Stanmore Park: sale of land	1947–68
AIR 2/17628	Signals Command: Deployment	1962–66
AIR 2/17664	"Montrose", Stanmore: Residence for AOCinC Fighter Command	1927–62
AIR 2/17768	Kelvin House, London: sale of vaults to Middlesex Hospital	1964–66
AIR 2/17960	Signals Command: Deployment policy	1966–67
AIR 2/17851	Air Support Command: Organisation	1965–72
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AIR 2/18014	Air Support Command: Policy	1967–69
AIR 2/18030	Air Support Command: Organisation policy	1965–68
AIR 2/18377	HQ Strike Command structure	1968–72
AIR 5/1201, 9, 10.11	Command Headquarters Air Defence of Great Britain	1926–36
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AIR 13/62	Balloon Command: Reorganisation and Elimination	1944–45
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AIR 15/49	Organisation of Command and Group Headquarters	1939–44
AIR 15/677	Combined operations area HQs: Locations	1938–39
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AIR 20/926	Transport Command: Organisation	1944–46
AIR 20/2811	Army Co-operation Command: Formation	1940–42
AIR 20/5451	Post-war organisation: RAF headquarters	1945
AIR 20/5522	Transport Command: Organisation and administration	1944–49
AIR 20/6480	Home Commands: Post war organisation	1944–55
AIR 20/6539	History of the Airfield Construction Service	1940–44
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AIR 20/10239	History of 25 Group, Flying Training Command	1954–56
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