



University
of Glasgow

Buckingham, William Frederick (2001) *The establishment and initial development of a British airborne force, June 1940-January 1942*. PhD thesis.

<http://theses.gla.ac.uk/1593/>

Copyright and moral rights for this thesis are retained by the Author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

**The Establishment and Initial
Development of a British Airborne Force,
June 1940 – January 1942**

**William Frederick Buckingham
PhD Thesis**

**Department of Modern History
University of Glasgow**

Abstract

The following thesis is an examination of the establishment and initial development of a British airborne force. Beginning with an examination of airborne development outside the UK up to 1940, it traces the growing British use of air transport as a tool for imperial policing in the inter-war period, and examines why this did not lead to the logical step of creating a dedicated British airborne force. The impact of German airborne operations and the defeat at Dunkirk in 1940 on British attitudes is then analysed, followed by a detailed examination of the mechanics of the establishment of a British airborne force, ending with the British 1st Parachute Brigade attaining operational status in January 1942.

This work contains 102,470 words, excluding footnotes, introduction and bibliography.

Table of Contents

ABSTRACT..... 2

TABLE OF CONTENTS 3

LIST OF FIGURES..... 5

INTRODUCTION..... 6

CHAPTER ONE SETTING THE SCENE: DEVELOPMENTS IN TRANSPORTING TROOPS BY AIR BEFORE 1940 8

I: CREATING THE INGREDIENTS: THE DEVELOPMENT OF BOMBERS AND AIR TRANSPORT TECHNIQUES DURING THE FIRST WORLD WAR..... 8

II. AN IDEAL TESTING GROUND: THE RAF AND THE DEVELOPMENT OF AIR TRANSPORTATION IN THE EMPIRE, 1918-1940..... 13

III. FROM A LOGISTICAL TO A TACTICAL ROLE: THE DEVELOPMENT OF AIR TRANSPORTATION OUTSIDE BRITAIN AND THE EMPIRE..... 17

IV. THE SEARCH FOR A FEASIBLE METHOD OF TACTICAL DELIVERY: ENTER THE PARACHUTE..... 19

CHAPTER TWO A QUESTION OF RESOURCES, NEED AND SUITABILITY: WHY THE BRITISH LEAD IN AIR TRANSPORTATION LAPSED IN THE 1930S..... 36

I. A POOR CLIMATE FOR INNOVATION: GOVERNMENT PARSIMONY AND THE BRITISH MILITARY IN THE INTER-WAR PERIOD 36

II. UNDERMANNED, OVERSTRETCHED AND IN NEED OF RENOVATION: THE ARMY IN THE INTER-WAR PERIOD 38

III. SEEKING JUSTIFICATION FOR EXISTENCE: THE RAF IN THE INTER-WAR PERIOD..... 40

IV. OPERATIONAL NECESSITY AS THE MOTHER OF FLEXIBILITY: UNOFFICIAL ARMY-RAF CO-OPERATION IN THE EMPIRE..... 44

V. HITS AND MISSES: BRITISH MILITARY THINKERS AND THE AIRBORNE IDEA IN THE INTER-WAR PERIOD 47

VI. AN INAPPROPRIATE METHOD FOR THE CIRCUMSTANCES: THE CASE AGAINST THE ESTABLISHMENT OF A DEDICATED BRITISH AIRBORNE FORCE IN THE INTER-WAR PERIOD..... 52

CHAPTER THREE A SALUTARY SHOCK: THE IMPACT OF GERMAN AIRBORNE OPERATIONS IN THE LOW COUNTRIES AND DEFEAT IN FRANCE, MAY - JUNE 1940..... 62

I. CATALYST AND EXAMPLE: GERMAN AIRBORNE OPERATIONS IN THE LOW COUNTRIES, MAY 1940..... 62

II: THE IMPACT OF DEFEAT ONE: THE ARMY IN FRANCE AND BELGIUM, 10 MAY-4 JUNE 1940..... 68

III: THE IMPACT OF DEFEAT TWO: THE RAF IN FRANCE AND BELGIUM 10 MAY-4 JUNE 1940, AND THE EFFECT UPON ARMY-RAF RELATIONS..... 71

IV. FIDDLING WHILE ROME BURNED: CHURCHILL'S DIRECTIVES OF JUNE 1940..... 74

CHAPTER FOUR IMMEDIATE REACTIONS: CHURCHILL'S DIRECTIVES, THE ARMY, AND THE RAF, 4 JUNE - 15 JULY 1940..... 85

I. COINCIDENTAL WITH A SHIFTING OF ATTITUDES: THE ARMY'S IMMEDIATE REACTION TO CHURCHILL'S RAIDING AND PARACHUTE DIRECTIVES..... 85

II. GENERALLY POSITIVE: THE ARMY'S RESPONSE TO CHURCHILL'S RAIDING DIRECTIVE 92

III. AIRBORNE EMBRYO: THE INITIAL ESTABLISHMENT OF A BRITISH PARACHUTE FORCE 96

IV. COVERTLY UNFAVOURABLE: THE AIR MINISTRY REACTION TO CHURCHILL'S PARACHUTE DIRECTIVE 99

V. THE BEGINNINGS OF A TRAINING AND DEVELOPMENT INFRASTRUCTURE: THE ESTABLISHMENT OF THE CENTRAL LANDING SCHOOL..... 104

CHAPTER FIVE LAYING THE GROUNDWORK: THE DEVELOPMENT OF A BRITISH AIRBORNE INFRASTRUCTURE, JULY 1940 – APRIL 1941 121

I. THE FIRST MAJOR STUMBLING BLOCK: PARACHUTE PROBLEMS..... 121

II. THE SECOND STUMBLING BLOCK: THE PROVISION OF AIRCRAFT FOR THE CLS - AVAILABILITY OR DUPLICITY?..... 126

III. ROUNDING OUT THE PARACHUTE IDEA: ENTER THE GLIDER 133

IV. REORGANISING AND IMPROVISING THE INFRASTRUCTURE: RINGWAY TO APRIL 1941..... 137

V. FROM TRAINING TO DEMONSTRATIONS AND OPERATIONS: THE CLE AND 11 SPECIAL AIR SERVICE BATTALION TO APRIL 1941..... 147

CHAPTER SIX DIVERGENCE AT THE TOP: THE WAR OFFICE, THE AIR MINISTRY, AND THE FIRST STAGE OF THE DEVELOPMENT OF THE BRITISH AIRBORNE FORCE.....	163
I. FROM RAIDING TO A LARGER ROLE: THE ARMY BEGINS TO SHIFT ITS VIEW	163
II. DIGGING IN OF HEELS: THE AIR MINISTRY'S REACTION TO THE WAR OFFICE'S SHIFT OF FOCUS.....	166
III : CARDS ON THE TABLE AT LAST: THE PAPERS OF 23 DECEMBER 1940 AND 10 JANUARY 1941	169
IV: MUTUAL MISUNDERSTANDING AND DIFFERING PHILOSOPHIES: AIR MINISTRY, THE WAR OFFICE AND THE SHAPE OF THE AIRBORNE FORCE	173
V. UNIMPRESSED WITH PROGRESS: CHURCHILL'S VISIT TO RINGWAY, 26 APRIL 1941	182
CHAPTER SEVEN TO THE VERGE OF ADEQUATE PROVISION: THE RAF AND THE DEVELOPMENT OF THE BRITISH AIRBORNE INFRASTRUCTURE, APRIL 1941 – JANUARY 1942.....	190
I. A SHIFT IN ATTITUDE: THE GROWTH OF SUPPORT FOR THE AIRBORNE PROJECT WITHIN THE RAF	192
II. THE ONGOING STUMBLING BLOCK: THE SEARCH FOR AIRCRAFT FOR THE CLE.....	194
III. PRESSURE FROM ABOVE SUCCEEDS WHERE PRESSURE FROM BELOW FAILED: AIR MINISTRY CONCESSIONS TO THE AIRBORNE FORCE	200
IV. LAYING THE FOUNDATIONS: PREPARING THE PTS FOR MASS TRAINING, SEPTEMBER TO NOVEMBER 1941	203
V. NEW BROOMS OR EMPIRE BUILDING?: INTERNAL POLITICS AT RINGWAY	207
VI. REINED IN AND REGULARISED: THE AIRBORNE INFRASTRUCTURE, MAY 1941 – JANUARY 1942.....	210
VII. SLOW MARCHING: GLIDER DEVELOPMENTS, APRIL 1941 – JANUARY 1942.....	215
CHAPTER EIGHT FROM MAVERICK RAIDERS TO A CONVENTIONAL FORCE: THE TRANSFORMATION OF 11 SAS BATTALION INTO THE 1ST PARACHUTE BRIGADE.....	229
I. NO LONGER A PAROCHIAL CONCERN: EXTERNAL INTEREST IN THE NEW BRITISH AIRBORNE FORCE ..	229
II. REFINING THE HOME AIRBORNE REQUIREMENT, JULY TO SEPTEMBER 1941.....	234
III. UNACKNOWLEDGED BUT PLAGIARISED NONETHELESS: THE POLISH GENERAL STAFF CONTRIBUTION TO DEFINING THE BRITISH AIRBORNE ROLE	240
IV. SIMILARLY UNACKNOWLEDGED: POLISH PRACTICAL INPUT TO BRITISH PARACHUTE TRAINING AND EQUIPMENT.....	246
V. CHURCHILL'S VISION REALISED AT LAST: 1 ST PARACHUTE BRIGADE BECOMES REALITY	256
CHAPTER NINE CONCLUSION.....	270
I. BRITISH AIRBORNE DEVELOPMENT, JANUARY 1942 – MAY 1945	270
II. AIRBORNE DEVELOPMENT OUTSIDE THE UK, JANUARY 1942 – MAY 1945.....	272
III. SENSIBLE INVESTMENT OR SPECTACULAR BLIND ALLEY: THE VALUE AND EFFECTIVENESS OF AIRBORNE FORCES	276
IV. THE BRITISH AIRBORNE EFFORT: JUSTIFIED DIVERSION OR MERELY A WASTE OF RESOURCES?.....	290
V. REFLECTIONS	295
GLOSSARY	305
BIBLIOGRAPHY	306
UNPUBLISHED SOURCES	306
PUBLISHED SOURCES.....	308

List of Figures

Figure 1 - Central Landing Establishment with effect from 1 October 1940	140
Figure 2 - Proposed Army "Invasion Corps", as detailed in WO Paper of 10 January 1941	172
Figure 3 - Airborne Forces Establishment and Glider Training Organisation, beginning 1 September 1941.....	204

Introduction

On 19 June 1998 I was privileged to attend the Aldershot parade at which the Parachute Regiment received new colours from the Prince of Wales. Conversation with Second World War Parachute Regiment veterans at the subsequent reception confirmed the findings of my research to that date. It was common knowledge that the British airborne force had been established in June 1940, that Winston Churchill was personally involved, and some knew members and had heard anecdotes of the original No. 2 Commando parachute cadre. That, however, was as far as it went, a situation that mirrors the position in the published sources. There, the establishment of the British airborne force rates a few pages at best, and a few lines at worst, even in the official and semi-official histories, such as Otway's *Airborne Forces*. This is understandable, for battlefield history provides more dramatic reading than that of establishment and background development.

This thesis therefore aims to rectify this omission, by charting and analysing the course of events that led to the establishment of a British airborne force. It will be argued that this process did not begin and end in the period June to September 1940, as is popularly claimed. Rather, it began in the period following the end of the First World War, when British forces in the empire established a world lead in the transportation of troops and material by air, a technique which then became a regular feature of British imperial policing activities. The experience thus gained was to prove invaluable in the latter stages of the war in Burma, which saw the garrisons of the Admin Box, Imphal and Kohima supplied and reinforced by air, a development which totally nullified the highly mobile tactics of the British Army's Japanese opponents.

A new and distinct offshoot of this process sprouted in mid-1940: the establishment of a large force of parachute soldiers in the UK. This goal was achieved in early 1942, when the British Army was finally able to field a brigade of trained paratroopers, which in turn provided the foundation for an airborne force in excess of two divisions by 1945. The first stage, however, took a year and a half due to the pernicious effects of inter-service rivalry, obstructionism, internal service politicking, and bureaucratic incompetence. It also involved subterfuge, high-level political intervention, drastic changes in policy, and the unacknowledged plagiarism of parachute developments from allies. That story constitutes the major focus of this thesis.

This thesis will also help to fill a gap in the historiography of the British Army and the Second World War. Hitherto, work in these areas has largely consisted of examinations of

the strategic view from the top, of specific battles and campaigns, augmented by participant accounts from the bottom. Both these approaches have been joined more recently by the examination of operational history, as epitomised by Murray and Millett's recent **A War To Be Won**. However, whilst all three perspectives are legitimate, they still do not provide the full picture. A further gap which needs to be addressed, and which also occupies the middle ground between high level decision making and tactical or battlefield history, is the development of fighting capabilities. David French in has made a start on this synthesis of operational and tactical history in his recent **Raising Churchill's Army**, and this thesis is intended to follow that lead.

Finally, I should like to take this opportunity to thank the following individuals and institutions for their assistance in making this work possible. Professor John Erickson and Dr Jeremy Crang, University of Edinburgh; Mrs Edith Philips of the Scottish United Services Museum, Edinburgh; Professor M. R. D. Foot; the late General Sir John Hackett; Lieutenant-Colonel Jan Jozef Lorys (retd.); Mr Alex Marshall; Mr Simon Moody and John Edwards of The Royal Air Force Museum, Hendon; Dr John Rhodes, Curator of The Royal Engineers Museum; the staff at The Public Records Office, Kew; Mr James Sterrett; Mr Andrzej Suchitz, Keeper of the Archives, The Polish Institute and Sikorski Museum; all the staff, academic and clerical, at the Department of Modern History, University of Glasgow; and last but by no means least, my academic supervisor, Professor Hew Strachan, whose guidance, patience and criticism were invaluable.

CHAPTER ONE

Setting the Scene: Developments in Transporting Troops by Air Before 1940

The idea of deploying troops from the air preceded the requisite technology by a wide margin. In 1784, Benjamin Franklin summarised the essence of what came to be termed airborne and more recently, airmobile and air-assault, warfare:

“Five thousand balloons, capable of raising two men each, could not cost more than five ships of the line...And where is the Prince who can afford so to cover his country with troops for its defense, as that ten thousand men descending from the clouds might not in many places do an infinite deal of mischief before a force could be brought together to repel them?”¹

However, it was well over a century before airborne idea was developed further. The First World War provided the impetus for the development of heavier-than-air flight, and by the end of the conflict aircraft and ancillary equipment had become sufficiently developed to make the transportation of troops by air a viable proposition. It will therefore be necessary briefly to detail developments during that conflict and in the inter-war period, in order to set the British 1940 example in its proper context.

I: Creating the Ingredients: The Development of Bombers and Air Transport Techniques during the First World War.

By 1914, most military powers had embraced aviation to a greater or lesser extent, almost exclusively as a reconnaissance tool. However, this role was rapidly widened to encompass air-to-air combat and, more importantly in this context, aerial bombing. Initially, the latter was confined to what would now be termed tactical bombing, not least because of the relatively small carrying capacity of available aircraft, which were almost exclusively single-engine machines with one or two crewmen. There was, however, a parallel line of development. This advocated the use of large custom-built aircraft, designed specifically to carry large bombloads, which could be used to strike at strategic targets.

The Germans were quick to appreciate the potential of “...air weapons to offset [British] naval power”.² High ranking members of the German military and naval staffs extolled the virtues of indiscriminant aerial bombardment, particularly against London, as a means of breaking the British will to fight as early as 1912.³ Initial German bombing efforts utilised vulnerable Zeppelin airships, but a heavy bomber unit was formed at the end of 1916. Officially labelled *Kagohl 3*, and unofficially as the *Englandgeschwader*,⁴ the unit carried

out day and night raids against London and south-east England from mid-1917, which were intended to “...crush the morale and will to fight of the English [sic] by disrupting war industry, communications and supply in south-eastern England”.⁵ The Germans were the first to implement a coherent strategic bombing strategy, but not to develop the necessary aircraft. Russian designer Igor Sikorski produced the four-engine *Ilya Muromets* in the summer of 1914, and Italian designer Gianni Caproni test-flew a large three-engine design in October the same year.⁶

However, it was the British who developed the concept and, more importantly, the means, of strategic bombing furthest during the First World War. The initial impetus came from the Royal Naval Air Service (RNAS), which was charged with protecting naval bases in the south of England from air attack.⁷ A rather liberal interpretation of this task was used to justify “...the first strategic air attack of the war” against the Friedrichshafen Zeppelin works by Lake Constance, on 21 November 1914.⁸ This was followed by a series of raids against targets in occupied Belgium in the spring of 1915. The relative success of these raids encouraged the RNAS to look for more suitable bombing aircraft. The Director of the Navy’s Air Department, Captain Murray Sueter, rejected the first design tendered by the Handley Page Company with the prophetic words “Look, Mr. Page - what I want is a bloody paralysing, not a toy!”⁹ Handley Page returned to the drawing board and in January 1915 came up with a design for the O/100 twin-engined bomber. This was to be the first of a long line of British heavy bombers that extended to the nuclear “V Bombers” of the 1950s.

The O/100 - the figure referred to the aircraft’s range in miles - first flew in December 1915, but subsequent development took almost another year. The first two operational machines were delivered in November 1916; the third was accidentally gifted to the Germans when the delivery pilot lost his way on New Years Day 1917. The new aircraft were used against “...chemical, explosives, and munitions factories and iron foundries in the Saar-Lorraine-Luxemburg region” until March 1917. The cessation of this effort was presented officially as an effort to aid the hard-pressed RFC elsewhere, although it may also have been due to the relatively poor returns for the effort involved.¹⁰ Nonetheless, the idea of a British heavy-bomber force for striking strategic targets had been established, along with something like the means to implement it. The idea was resurrected in October 1917 in reprisal for the indiscriminant German air raids on London and south-east England. The O/100s were reassigned to the RFC’s new 41st Wing, which struck at the German cities of Stuttgart, Mainz and Cologne. 41st Wing was expanded to a brigade on 1 February 1918 and ultimately into the semi-autonomous Independent Force (sometimes called the

Independent Air Force) in June 1918.¹¹ The Independent Force dropped five hundred and fifty tons of bombs on German targets in the period 6 June-10 November 1918.¹² By this time it was equipped with the longer-ranged Handley Page O/400 bomber; the even larger Handley Page V1500, which was designed to reach Berlin, entered service just too late to see action.¹³

Thus, by 1918 aerial technology had produced aircraft of sufficient size and power to make the transportation of troops by air a potentially reasonable proposition. Troop transportation was not seriously considered as an application for airpower during the First World War, and little was done to develop, or even explore, the possibilities. Given the circumstances and short time-scale involved, this is understandable. The development of large aircraft was a costly business, and the scarce resources such work required were allocated solely in pursuit of the specific purpose of bombing, an intent that precluded experimentation in less aggressive directions. In addition, with the possible exception of the *Ilya Muromets*, machines of sufficient size and power to carry even small numbers of troops were not available in significant numbers until the latter stages of the conflict. Even had there been the time and the inclination, there was more to the matter than merely substituting an alternative cargo up to the given payload. Aircraft configured to carry bombs may not be physically suitable for the carriage of alternative loads, and particularly passengers, as the RAF discovered in 1940 when it pressed the Armstrong Whitworth Whitley bomber into service as a paratroop transport.

Nonetheless, there was some limited use of aircraft for transportation during the First World War. They were used regularly to deliver intelligence agents behind enemy lines, initially by landing the aircraft, and later, in an attempt to minimise the risk to the aircraft and pilot, by parachute.¹⁴ It appears, however, that this technique was rarely, if ever, used to deliver more than individuals,¹⁵ and the most significant use of aircraft in the transport role during the First World War therefore lay in the delivery of material rather than men. The British pioneered this technique, initially in the attempt to supply the besieged garrison of Kut in Mesopotamia, in March and April 1916.

The effort to supply Kut by air was a double first. It was the first large-scale logistical effort, and it was also the first to employ the parachute for dropping supplies. Parachutes were used to deliver a 70-lb. millstone to Kut on 27 March 1916, in an effort to allow local production of flour. According to the official history, a wide variety of other items were also delivered by air. These included "...medical comforts, wireless parts, launch engine parts, mails, newspapers and money", although it is not clear which items were free-

dropped and which, apart from the millstone, used parachutes. The focus and tempo of the effort increased as the siege began to bite, and in mid-April 1916 the garrison commander requested a minimum of 5,000 lb. of supplies per day, including flour, chocolate, salt and ghee cooking oil for the garrison's Indian troops. Food drops commenced on 15 April 1916, with 3,350 lb. being delivered on the first day. The effort was discontinued on 29 April 1916, by which time one hundred and forty flights had delivered a total of 19,000 lb. of supplies, 16,800 lb. of which was recovered by the garrison. Whilst this fell significantly below the requested minimum, it does not detract from the magnitude or significance of the effort, particularly given the adverse conditions.¹⁶

The effort at Kut proved the viability of the concept, and British forces employed and expanded the technique. The Middle East remained the proving ground, not least because the weather and terrain were generally favourable for operating aircraft. In addition, there was little enemy aerial opposition, and the great distances and lack of an extensive road and rail net additionally enhanced the appeal of air transportation. On 22 September 1918, for example, the single Handley Page O/400 bomber stationed in the Middle East was used as a temporary freight-carrier in support of an isolated RAF detachment, delivering a ton of assorted fuel, spare parts and other supplies in the process.

The technique was transferred to the Western Front, in direct support of ground forces on the battlefield, although the hostile environment precluded the use of large aircraft like the Handley Page machines. On 4 July 1918, No. 9 Squadron RAF used twelve specially adapted RE8 aircraft to deliver ninety-three boxes, containing a total of 111,600 rounds of ammunition, to the 4th Australian Division. Prior preparation allowed the aircraft to make four thirty-minute sorties each in the roughly six-hour period of the operation, which was carefully co-ordinated with the ground forces. The latter were provided with large white cloth letters "N" and "V" to signify clipped rifle or belted machine-gun ammunition. The drops were made from eight hundred feet, two aircraft being lost in the course of the operation. Repeat drops were made on 21 and 22 August and on 1 and 2 October 1918. One hundred and twenty-one boxes of ammunition were delivered, along with signal flares and coils of barbed wire. Subsequent drops also included food. RAF Nos. 82 and 218 Squadrons delivered 15,000 individual rations, totalling thirteen tons, to isolated French and Belgian troops on 2 and 3 October 1918, an operation which merited a mention in an official RAF communiqué.¹⁷ Ten days later No. 35 Squadron delivered two tons of food in seventeen sorties to the starving population of Le Cateau, despite adverse weather conditions.¹⁸ This shows that British air delivery of material to ground forces was well established and expanding at the close of hostilities in 1918. It also appears that this was a

solely British development, for none of the material examined makes any mention of other air arms utilising similar techniques.

The practical implementation of the technique may have been restricted to delivering material during the First World War, but there was also some theoretical examination of the possibilities of expanding the concept to include the delivery of troops. In October 1918, Colonel William Mitchell, then head of the air operations department of the US 1st Army formulated an ambitious scheme "...for the capture of Metz [that] was startling in its originality: no less than the delivery of 12,000 men by parachute behind German lines."¹⁹ Handley Page O/400 bombers from the British Independent Force were intended to transport troops from the US 1st Infantry Division, divided into ten-man groups.²⁰ Unsurprisingly, Mitchell's scheme was rejected, not least because the command and control machinery and procedures necessary to co-ordinate such an operation simply did not exist. More crucially, the troops slated for involvement lacked specialist parachute training, and there were simply not enough parachutes available even if they had been so trained. Whether Mitchell's ill thought-out scheme deserves to be regarded as "a milestone in airborne history" is therefore open to debate.²¹ It could be argued that in practical terms, it did little more to further the cause of airborne warfare than the rhetorical hypothesising of Benjamin Franklin one hundred and thirty-two years previously.

Mitchell may have been the first to advocate the parachute as a method of troop delivery, but he was not the first to suggest the deployment of troops from the air. In October 1917, Winston Churchill published a paper covering a wide range of air related matters. One proposal was for the formation of "flying columns" of air transported troops for operations behind enemy lines.²² This proposal was typically Churchillian, insofar as it was long on theory but short on detail. Nonetheless, it was significant for a number of reasons, and not simply because it pre-dated Mitchell's scheme. First, it pointed the way to the pioneering use of air transportation by the RAF as an adjunct to imperial communication and policing after 1918. Second, it establishes that Churchill's June 1940 demand for the creation of a British airborne force was not merely a knee-jerk reaction to German airborne activity in the Low Countries. Rather, it was the result of Churchill's long-standing interest in air matters *per se*, which dated from the beginnings of British military aviation. Churchill was made Secretary of State for War and Air in January 1919, and lobbied hard for the RAF to be given an imperial role. As a result, the RAF officially assumed responsibility for the defence of Iraq on 1 October 1922.²³ This, the so-called policy of Air Control, was the beginning of a process that saw RAF air transport and supply of ground troops spread across the Middle East in the 1920s, and to India in the 1930s.

II. An Ideal Testing Ground: The RAF and the Development of Air Transportation in the Empire, 1918-1940

The end of hostilities in 1918 found the independent British air arm uniquely positioned to develop air transportation. The RAF was “arguably the most effective air service in the world”,²⁴ and enjoyed a wealth of operational aeronautical experience and expertise as a result. It was also equipped with large aircraft that possessed at the very least the potential for adaptation for transportation, such as the Handley Page 0/400 and V1500. Equally important, the post-1918 RAF needed a new role to justify its continued independent existence, and the prevailing conditions meant that role had to be established in the empire. The vast expanses of the empire meant that transportation had to play a large role in whatever activities the RAF undertook. As a result, the RAF therefore pioneered work in a variety of ways that have since become staples of civilian air transportation.

For example, in May 1919 the Air Ministry proposed the establishment of “...weekly RAF services to carry 1,500 lb. of mail between Egypt and India using two Handley Page 0/400 squadrons”. This was followed in January 1920 by a less ambitious scheme to carry mail and passengers between Baghdad and Cairo. The former scheme was stillborn, largely because of a high accidental attrition rate suffered by a force of 0/400s despatched to Egypt as part of a mobility demonstration.²⁵ The Baghdad to Cairo scheme, however, commenced in June 1921, and carried over four tons of assorted mail and one hundred and twenty passengers in the first twelve months.²⁶ The next step was to expand this civilian oriented activity to encompass military needs. This process can be roughly divided into three successive stages, all of which commenced between 1919 and 1923, and which became increasingly intermingled thereafter. The first stage was the air evacuation of casualties, the second was the evacuation of civilians from threatened areas, and the third was the culmination of the process, with the deployment of fully equipped troops.

The first recorded air evacuation of a British military casualty occurred in the Sinai desert in February 1917. This capability was deliberately factored into the RAF's first direct foray into imperial policing, the provision of “Z” Squadron to the joint Army-RAF campaign to subdue the “Mad Mullah” in Somaliland in January 1920.²⁷ Z Squadron fielded the world's first custom-built air ambulance, based on a single-engined DH9 aircraft. Nicknamed “the hearse”, the aircraft was produced by the Royal Aircraft Establishment (RAE) Farnborough, on the recommendation of Wing-Commander W. Tyrell, the senior Medical Officer attached to Z Squadron. This, and the parallel regular use of unmodified aircraft for “casevac” and “aeromedical” tasks in Iraq, encouraged the

Air Ministry to procure three specially configured in 1921-22, based on specially purchased Vickers Vimy Commercial aircraft; the Commercial was the civilian version of the RAF's Vernon transport aircraft. The first was an expensive one-off modification, complete with medical oxygen equipment, passenger cooling fans, an electric kettle and a toilet. Unfortunately it was written off in a crash before it was able to perform in its intended function. The two subsequent models were less sophisticated, only differing from the standard RAF Vernon by having a nose-loading door and rails for stretchers fitted above the passenger seats, and were thus virtually indistinguishable from the standard model.²⁸

An outbreak of dysentery among troops operating in Kurdistan in April 1923 prompted the RAF's first major medical airlift. The following eyewitness comment clearly illustrates the value of air transportation in this regard:

“At Girde Telleh the sick, amounting to one hundred and ninety-eight, were evacuated by air to Baghdad via Kirkuk, some two hundred and sixty miles, in a few hours. It was a very creditable achievement. The sick would otherwise have had a six-day journey by donkeys and would have suffered severely.”²⁹

By mid-May 1923, two hundred and fifty-five patients had been shuttled to Baghdad. The success of the Baghdad-Kirkuk medical lift had two effects upon subsequent RAF aircraft procurement policy. First, the fact that the majority of the lift was carried out by standard Vickers Vernon transports cast doubt on the need for specially-configured ambulance aircraft, and the Air Ministry curtailed its efforts in that regard accordingly. Secondly, in conjunction with the concurrent beginning of the practice of airlifting troops to trouble spots discussed below, the Baghdad-Kirkuk lift confirmed the utility of air transportation. As a result, until the late 1930s Air Ministry specifications for bomber aircraft classified them as bomber/transports, with the additional proviso that they also be easily adapted to carry casualties if necessary.

The efficacy of evacuating casualties by air was thus proven, although an attempt to extend the concept to the UK in 1925 was discontinued as uneconomic after six months. Despite this, the air evacuation of casualties nevertheless became commonplace in the empire throughout the inter-war years. In the Middle East, between 1925 and 1935 an average of one hundred and twenty patients a year was airlifted to hospitals in Egypt, Palestine and Iraq. From April 1929 aircraft were also used to shuttle serious cases requiring sea repatriation to the UK to Port Said for embarkation. This service was later extended to include the port of Jaffa.

The Quetta earthquake in May 1935 was responsible for bringing medical air evacuation into widespread use in India. RAF aircraft flew in a twenty-six strong Army medical unit, complete with supplies of anti-tetanus serum, 4,300 lb. of clothing, 12,750 lb. of medical supplies and food in the twenty-one day period following the disaster. They also evacuated one hundred and thirty-six casualties for treatment at Karachi, Lahore and Risalpur. By 1937 the total of Indian medical cases moved by air exceeded those of Iraq and the Middle East. This was due in part to the campaign in Waziristan, which accounted for half the two hundred and ninety-eight cases moved by air in India that year. The technique had come a long way in the two decades since its inception. By 1939, RAF aircraft had carried some 2,600 assorted medical cases a total of 320,000 miles.³⁰

The second stage expanded the RAF's air transport activities to include the evacuation of officials and civilians from threatened locations. The first large-scale effort occurred in September 1922, when sixty-seven assorted evacuees were lifted from Sulaimaniya in Iraq. The operation took six hours, and used DH9, Bristol Fighter, and twin-engine Vickers Vernon aircraft.³¹ Subsequent evacuations were larger and sustained. In November 1928, a rebellion in Afghanistan necessitated the evacuation of the British and other legations from the Afghan capital, Kabul. Beginning on 23 December 1928, and continuing despite severe winter conditions until February 1929, a total of five hundred and eighty-six passengers were flown to safety in India, along with 24,000 lb. of baggage.³²

The third, and most pertinent, stage in this development was the expansion of British air transportation to include the carriage of armed troops. There is no evidence to suggest this development was formulated from above. Rather, it appears to have been the result of pragmatic, on-the-spot decision making by those at the "sharp end". Such initiative was by no means uncommon in the empire. The relatively small proportion of RAF strength engaged in transportation, and the fact that this proportion remained virtually static, supports this. No. 70 Squadron, for example, was involved in the Sulaimaniya evacuation of 1922, the first airlift of troops in 1923, in the Kabul evacuation of 1928-29, and in the pioneering battalion-sized troop lift from Egypt to Iraq in 1932. One advantage of this relatively small commitment was that it allowed a high degree of operational experience to be concentrated and passed on over time. It also allowed the establishment of good rapport with the Army. It can therefore be argued that the expansion of the RAF's transport activities to include the carriage of troops was a logical progression, part-driven by necessity.

The first military airlift to include troops occurred on 21 September 1920, when two Handley Page 0/400 bomber aircraft successfully lifted a dismantled mountain gun with crew and ammunition from Heliopolis to Almaza in Egypt. The gun was brought into action within seven minutes of the aircraft touching down.³³ The RAF received its first Vickers Vernon aircraft, which was specially configured by the manufacturer at the Air Ministry's request for carrying freight and passengers, at the end of 1921. Consequently, this also made the carriage of complete units of troops a practical proposition.³⁴ Thus, in February 1923 two complete companies of Sikh troops were lifted from Kingerban to Kirkuk in Iraq to stem a native insurrection. In May 1924 a company of the Inniskilling Fusiliers was lifted one hundred and fifty miles from Baghdad to Kirkuk in response to a further outbreak of civil disorder. These operations set the pattern for future crisis management measures, and subsequently extended the technique into the realms of what would now be termed "strategic lift", albeit on a comparatively small scale.

In August 1929, a fifty-two strong detachment from the South Wales Borderers was lifted by air from Egypt to Jerusalem, to assist in quelling civil disorder there. A company of the Kings Regiment was airlifted for the same purpose from Palestine to Cyprus on 23 October 1931, the first airlift of troops over the open sea.³⁵ In June the following year, the RAF mounted its largest single air transport operation of the inter-war period. This was the airlift of five hundred and twenty-six men of the 1st Battalion, the Northamptonshire Regiment, over eight hundred miles from Egypt to Iraq. This operation was subsequently hailed a "striking demonstration of the mobility conferred by the use of aircraft as well as of close and effective co-operation between the Army and the Royal Air Force".³⁶ Twenty-five Vickers Victoria aircraft were used, and the operation required thirty-six separate sorties, spaced over the six-day period 22 to 27 June 1932. The lift was repeated in reverse over a less hurried twenty-five day period between 18 July and 12 August 1932.³⁷

The Egypt-Iraq lift proved the efficacy of the method beyond doubt, for subsequent troop-lift operations were larger, although they were spread over longer periods. For example, during the Waziristan campaign, a series of lifts moved a total of 5,750 troops, and four hundred tons of supplies between November 1936 and May 1938.³⁸ The practice was also extended beyond crisis management to encompass more routine troop movements. This included the "Chitral Relief", a twice yearly garrison relief in Chitral province on India's NorthWest Frontier. This usually entailed a thirty-six day march by the troops involved, as well as the deployment of a substantial security force. Carrying out the relief by air was first mooted in 1927, and by 1938 the shuttling of complete companies back and forth was

a matter of routine. The 1940 relief was conducted entirely by air,³⁹ thereby laying the foundations for the large-scale airlift operations mounted against the Japanese in 1944.⁴⁰ By the 1930s, the technique had been transferred from the empire to the UK, albeit on a much more modest scale. From the mid-1930s, the RAF provided aircraft for short periods at Farnborough for troop acclimatisation on an annual basis. In 1938 5,250 troops took part in air acclimatisation flights. This included the despatch of a platoon-sized detachment of Coldstream Guards to participate in a tactical landing exercise at Catterick Barracks in Yorkshire.⁴¹

By 1940, therefore, air transportation by the RAF had become an accepted, regular and important feature of British military activity across the empire and, to a lesser extent, at home. However, British development did not proceed beyond that point. There was no effort, for example, to expand the air transportation of troops with parachutes or gliders, although these methods were taken up elsewhere. There were specifically British reasons for this seeming omission, but before examining these, it will first be necessary to conclude this chapter with an examination of airborne developments up to 1940 outside Britain.

III. From a Logistical to a Tactical Role: The Development of Air Transportation Outside Britain and the Empire

British forces were by no means alone in appreciating or applying the air transportation after 1918, with the US being an early convert. The United States Marine Corps (USMC) deployed and supplied isolated outposts by air during the 2nd Nicaraguan Campaign of 1925-1929, and also used aircraft to evacuate casualties. A total of 21,148 USMC personnel were moved by air over that period. The US Army airlifted a single field artillery battery across the Panama Canal Zone in 1931, and repeated the exercise in 1933 with a full artillery battalion. In 1932 a small force of infantry were air landed during tactical manoeuvres at Fort Du Pont, Delaware.⁴² The German military also created an air transport capability. In 1936 the *Luftwaffe* carried out a sustained airlift on behalf of Franco's Spanish Nationalist forces. Between July and September 1936, German Junkers 52 aircraft shuttled almost 9,000 troops, with their equipment, support weapons and ammunition, from Morocco to Spain.⁴³

However, the main player besides Britain in the air-landing field for much of the inter-war period was the Red Army. Future Marshal M. N. Tukhachevsky carried out a series of air landing trials in the Leningrad Military District in 1928. The results were collated in a paper entitled "Operations of an Air Assault Force in an Offensive Operations". A reinforced-company size exercise was held the following year based on the paper, after

which Tukhachevsky proposed the formation of "...a sample air-motorised division ...for use as an operational-strategic air-landing force".⁴⁴ Imperial policing activity in Central Asia presumably played a part in prompting the Soviet developments. On 27 May 1928 the 8th Independent Reconnaissance Aviation Detachment carried out an "air-landing assault" against Moslem *Basmachi* guerrillas in the Turkestan Military District;⁴⁵ *Basmachi* was a widely used term for bandits in Central Asia.⁴⁶ Other Soviet units carried out at least one, and possibly two, similar operations in this period. A contemporary account of an air landing operation was published in January 1929, which may possibly refer to the operation of the previous May. The account included operational conclusions and recommendations for units engaged in similar activity.⁴⁷ Another operation was carried out later in 1929, when an air-landed party was credited with driving off another band of *Basmachi* besieging the garrison of Garm in Tadzhikistan.⁴⁸

Whatever its inspiration, Tukhachevsky's theoretical work was taken up by others, especially the chief of staff of the Red Army's air component, A. N. Lapchinsky. Lapchinsky "...trumpeted the feasibility of harnessing aircraft to the task of large-scale delivery of combat forces into the enemy rear",⁴⁹ and drew up detailed calculations for a variety of possible employments from battalion to regimental size. He also suggested such forces be used to support offensive action by conventional ground forces, to threaten enemy flanks, and to seize geographical features such as river crossings or defiles in order to disrupt enemy communications.

In March 1931 a company size "aviation motorised landing detachment" was formed in the Leningrad Military District, and from January 1932 similar detachments were authorised for the Moscow, Belorussian and Ukrainian Military Districts, although only the Leningrad unit was fully established.⁵⁰ In December 1932 the Leningrad detachment was expanded to a brigade, and redesignated the "3d Airlanding Brigade (Special Purpose)". The Brigade had three battalions, and an organic air group of three squadrons. Smaller district detachments were again established elsewhere from March 1933, along with numerous battalion and company-sized units attached to corps and divisions across the Soviet Union. By January 1934, the Soviet airborne establishment numbered 10,000 men, complete with representation on the Red Army staff, and a dedicated training organisation linked to a coherent operational doctrine.⁵¹

It is therefore beyond dispute that transporting troops and material by aircraft was widely practised in the inter-war period. However, the Achilles heel of the method lay in the total reliance of fixed wing aircraft upon a suitable and secure landing ground. In this sense, the

technique was analogous to that of rail transportation a century earlier. Both methods allowed hitherto undreamed of mobility, but mobility trammelled within relatively narrow parameters. The need for suitable and secure landing places thus limited the practical utility of air transportation to the strategic and operational, rather than tactical, sphere. The Soviet operations in the late 1920s show that more aggressive application of the technique was possible, although it should be noted that the Soviets profited from novelty value, and were small in scale. The 1929 landing at Garm, for example, employed only three light aircraft and fifteen men including aircrew, and was mounted in a flat, desert region ideal for landing.⁵² It is highly likely that things would have gone rather differently once the *Basmachi* became aware of the limitations of the method, as they undoubtedly would. Landing a large, heavily laden transport aircraft in the face of opposition, even that from unsophisticated tribesmen, remains an extremely hazardous and foolhardy act. Clearly, what was required was a method that would allow troops to be delivered *without* landing the aircraft. Two methods were developed, which have become synonymous with airborne forces: the parachute, and, to a lesser extent in popular perception if not practice, the glider.

IV. The Search for a Feasible Method of Tactical Delivery: Enter the Parachute

Experiments with man-carrying parachutes go back at least as far as the pioneering balloon flights that so impressed Benjamin Franklin. Frenchman A. J. Garnerin made jumps from a hydrogen balloon over Paris and London in 1797 and 1802 respectively. Garnerin used a “rigid” parachute, in which the shape of the parachute canopy was supported by spokes, rather like an umbrella. Two Americans, brothers Samuel and Thomas Baldwin, developed the more familiar “limp” parachute. The brothers demonstrated their new invention at Golden Gate Park, San Francisco, on 30 January 1887. The first recorded descent from an aircraft using the limp parachute also occurred in the United States, twenty-five years later, when Albert Berry jumped from a monoplane over Jefferson Army Barracks, Missouri on 28 February 1912.⁵³

As with heavier-than-air flight, it was the First World War that provided the impetus for more systematic development. The first military application of the parachute was as a lifesaving device, when the British Army adopted Everard Calthorpe's “Guardian Angel” parachute to allow observation balloon crews to escape from their extremely inflammable craft in the event of enemy attack.⁵⁴ Parachutes were also used to a limited extent for more offensive purposes. One secondary source claims that French, Italian and Russian

intelligence gathering and sabotage parties were dropped behind enemy lines,⁵⁵ and another that the British used them to deliver agents and carrier pigeons behind enemy lines on the Western Front and in Italy.⁵⁶

In British service, the latter application was a subsidiary one, the primary being aerial resupply. As cited above, this began at the siege of Kut in 1916, and was carried over into the inter-war period. In 1923, British troops on campaign in Kurdistan were supplied with a wide variety of material, including 1,000 pairs of boots and 3,000 pairs of socks, by parachute.⁵⁷ The technique was not always an unqualified success, or without risk to the recipients, as this eyewitness account from the 1923 Kurdistan drop shows:

“A great quantity of the stores fell on ground from which they could not be recovered; sacks of flour and grain were dropped only to split open on the ground; a mule was knocked over; a bag of horse shoes brought down a tent; while a rain of boots caused many soldiers to run about with a left or right boot in their hand, looking for its mate. Finally, when a party of officers had almost suffered the fate of the mule, the dropping of further consignments was stopped by an order communicated by wireless.”⁵⁸

Nonetheless, the use of parachutes for resupply became commonplace in the empire. In September 1930, the Chitral relief column, consisting of 1,400 troops and their animals, were supplied for two days solely by air. Around six tons of rations and forage were dropped at pre-arranged night stopping points. Air supply also played a vital part in the Waziristan campaign of 1936-38, particularly in the period October 1936 to January 1937, when heavy rains rendered road transport impossible for troops operating in the Khaisora Valley.⁵⁹ However, it was the Italian military which first took the step of using the parachute to deliver numbers of troops simultaneously. This was made possible by the development of the “Salvatori” static-line parachute, and it may be advisable at this point to provide a little technical detail about parachutes.

Parachutes can be broadly grouped into two types, static-line and rip-cord. These terms refer to the method used to initiate the opening sequence of the parachute canopy. The rip-cord parachute can be deployed at a time of the parachutist's choosing, by pulling a strap called the rip-cord. This method is commonly used by civilian parachutists and, more recently, specially trained military personnel. The latter are usually Special Forces troops, utilising specialist techniques developed since 1945, such as HALO (High Altitude Low Opening) to avoid detection from the ground. In contrast, the static line parachute performs the action of deploying the parachute canopy automatically, via a strap or cord, called the static-line, linking the parachute to a suitable strong point in the aircraft. All the

parachutist has to do is attach the static-line prior to leaving the aircraft and gravity does the rest.

The static-line method has obvious advantages for military parachuting. Minimising individual input reduces the possibility of human error, and simplifies rote training of parachuting skills in a minimal number of set drills. It also leaves the military parachutist free to concentrate on getting himself and his equipment to and through the aircraft door as quickly as possible, with a minimum of distraction. This is often no mean feat in itself, given the very heavy loads paratroopers are usually obliged to carry in addition to their parachutes. Lack of distraction is a vital consideration under operational conditions, when the aircraft may be taking evasive action, and possibly in the dark. Speed is doubly important because military parachuting usually involves jumping as a group or "stick" rather than as individuals, and speed in exiting as a compact group minimises the dispersal of the stick between leaving the aircraft and reaching the ground. This in turn reduces the time necessary for post-jump re-organisation. Consequently, static-line jumping is the standard military parachuting technique employed worldwide.

Pioneering civilian parachutists like the Baldwin brothers and Albert Berry used both methods, usually depending on whether the parachute pack was carried on the parachutist's body, or mounted on the aircraft or balloon. The latter practice was originally utilised due to the great bulk and weight of early parachutes, factors that at least partially justified the oft-quoted reluctance of the British authorities to issue combat pilots with parachutes during the First World War. Models tested by the Air Board for use by pilots in January 1917 weighed up to forty pounds, a considerable burden for contemporary aircraft.⁶⁰ Such equipment was clearly of limited utility for military purposes, and thus required further refinement to resemble the backpack type parachutes synonymous with the term today. The first modern parachute was a ripcord model demonstrated by American entrepreneur Leslie Irvin to officers of the US Army Air Service in April 1919. The Italian Salvatori model was developed along similar lines based upon the pre-1914 work of American carnival parachutist Charles Broadwick. Broadwick designed and demonstrated a static-line parachute carried in a bag stitched to the back of a modified jacket.⁶¹

Thus equipped with a suitable man-carrying parachute, the Italians went on to develop a training infrastructure and tactical doctrine. In 1927 they set up the world's first formal military parachute training course, catering for around two hundred and fifty trainees. On 6 November the same year, Italian parachutists performed the world's first collective parachute drop by fully equipped troops at Cinisello airfield near Milan. Despite this

double world lead, however, the Italians failed to maintain their momentum. This may have been linked to the death of the commander of the new arm, General Guidoni, in a parachuting accident in 1928. Nonetheless, by the end of the 1930s Italian forces fielded several parachute battalions, which took part in manoeuvres in Libya in 1937 and 1938.⁶²

The airborne lead in the inter-war period passed from the Italians to the Red Army. In August 1930 tests were conducted at Voronezh to minimise dispersal and speed up re-formation of units after landing. In September the same year, an eleven-strong parachute detachment carried out a successful raid on a divisional headquarters during manoeuvres in the same area, and further tactical exercises were performed near Leningrad in August and September 1931. A forty-six strong "parachute echelon" was added to the "aviation motorized landing detachment" at Leningrad, tasked with the seizure of "airfields and landing strips in the enemy rear to secure an area for landing the main force".⁶³ The landing detachment was expanded to a brigade in December 1932, with two airlanding and one parachute battalions.⁶⁴ By the mid 1930s, when the Soviet parachute arm was displayed to Western military observers and cinema audiences,⁶⁵ drops of battalion and brigade size were a matter of routine.

The scale of this expansion is clearly illustrated by the airborne portion of the 1935 manoeuvres in the Kiev Military District. The airborne task was to secure landing areas and crossings on the River Dnieper for a corps mechanised attack. A simultaneous drop of 1,188 paratroops seized landing grounds, which were then used to air land a further 1,765 troops, complete with armoured cars, light tanks and artillery.⁶⁶ Later reports claimed that a further 2,500 men were air landed within a forty minute period.⁶⁷ A larger parachute exercise took place in the following year in the Moscow Military District. On 22 September 1936, a diversionary drop of 2,200 paratroops seized river crossings and attacked the "enemy" rear. An hour later a further 3,000 paratroops seized an airfield forty kilometres away, into which an entire infantry division was air landed.⁶⁸ Given this, Commissar of Defence Voroshilov may not have been exaggerating when he claimed that "...the Red Army then possessed over 15,000 well-trained parachute jumpers and that a doubling of that number was planned for 1937."⁶⁹

A crucial factor in the Soviet parachute expansion was the popularity of civilian sport parachuting in the Soviet Union, sponsored by the *Komsomol* (Communist Union of Youth) and *Osoaviakhim* (Society for the Promotion of Defence and the Furthering of Aviation and of the Chemical Industry of the USSR). These organisations provided parachute-training towers, open to both sexes, in every major town in the Soviet Union.⁷⁰

According to one contemporary source, two million qualified parachutists in the Soviet Union had been trained by 1939.⁷¹ Soviet sources claim the Red Army possessed fifteen airborne brigades in May 1941, grouped into five airborne corps, totalling approximately 100,000 men.⁷²

The Soviets also formulated a doctrine for its airborne force. The Red Army Order of 1932, entitled “Temporary Regulation on the Organisation of Deep Battle”, included a “Regulation on the Operational-Tactical Employment of Air Motorised Landing Detachments”. This was based largely on Tukhachevsky’s 1929 work, which was then expanded by the Chief of Airborne Service of the Red Army Air Force staff, I.E. Tatarchenko, in a paper entitled “Technical, Organisational, and Operational Questions of Air Assault Forces”. This advocated the delivery of substantial forces into enemy rear areas. Surprise was deemed crucial, and was to be heightened by launching simultaneous landings, possibly at night and/or in poor weather, to dilute enemy response. The landings were to be in four stages. First, small teams were to be inserted by parachute to locate suitable landing areas. These sites would then be secured and protected by a parachute detachment for the delivery of a more heavily armed vanguard, which would in turn protect the arrival of the main force, complete with light tanks and other vehicles. Once in place, the whole force would “commence operations in close co-ordination with main *front* forces”.⁷³

Tatarchenko’s ideas were integrated into the Red Army’s 1936 Field Service Regulations, which formalised the new Soviet mechanised doctrine of “deep battle”.⁷⁴ According to Article 7 of the new Regulations:

“Parachute landing units are the effective means...[of]...disorganizing the command and rear services of the enemy. In coordination with forces attacking along the front, parachute landing units can go a long way toward producing a complete rout of the enemy on a given axis.”⁷⁵

It was therefore no accident that the 212th Airborne Brigade fought at the Khalkin Gol on the Mongolian-Manchurian border in summer 1939, although the rapid progress of Soviet armoured formations rendered parachute insertion superfluous.⁷⁶ The scope for large-scale airborne operations was restricted in the Winter War against Finland, although a few small-scale reconnaissance and diversionary parachute operations were carried out. However, the 201st, 204th and 214th Airborne Brigades carried out several drops during the Soviet occupation of Bessarabia in June 1940. Two of these involved full brigades, and Soviet paratroops successfully occupied the cities of Bolgrad, Kagul and Izmail.⁷⁷

The scale and high profile of Soviet airborne activity in the inter-war period inspired investigation and imitation. A Soviet-staffed Spanish Republican parachute school was set at La Rosas, and in April 1938 an airborne assault was planned to wipe out the Nationalist Condor Legion on the ground at its base at Barbastro. The attack was only stymied by a lack of suitable parachuting aircraft.⁷⁸ The French established an experimental force of “*infanterie de l'air*” following the Soviet manoeuvres in 1936, consisting of two parachute companies with an attached troop-carrying squadron, which was disbanded in 1939.⁷⁹ Poland also imitated Soviet developments, with particular regard to the promotion of civilian sport parachuting, and seemingly without direct Soviet involvement. The present author has been unable to locate any evidence of direct Soviet-Polish contacts, which is hardly surprising given the high level of historical and political enmity between those states at that time. It is therefore likely that the Polish imitation of the Soviet model was based upon knowledge gained through osmosis, which is the stated opinion of a retired Polish airborne officer who participated in the early Polish military parachuting effort.⁸⁰ This view is supported by the nature of Polish developments. The activities of the Polish LOPP (League for National Air Defence) mirrored that of the Soviet *Komsomol* and *Oasviakhim*, by promoting sport parachuting and gliding and providing public facilities. The first Polish public parachuting tower was erected in Warsaw in 1936, and by 1939 seventeen more had been erected across the country. Polish Boy Scouts gave a parachuting demonstration at the 5th International Scouting Jamboree in August 1937.⁸¹

The Polish military initially used parachuting as a character-building exercise for trainee officers, with voluntary training courses being offered to cadets in their final year of training; other options included sport gliding, rock climbing and hill walking. Military parachute towers were constructed at officer cadet schools at Bydgoszcz and Legionovo, and at the infantry school at Komorovo. Volunteers underwent a four-week course, which incorporated pre-jump ground training, two or three jumps from a captive balloon, and three jumps from an aircraft. They were also taught parachute packing, and were responsible for packing their own equipment. Rip-cord parachutes were used, which required a high degree of judgement on the part of the trainee. An interviewee recalled the near-demise of one fellow-cadet during a balloon jump at Komorovo. The trainees were taught to use the cable tethering the balloon as a guide for when to operate their rip-cords. The cadet in question closed his eyes on jumping and missed seeing the cable as a result. He operated the rip-cord on his own initiative, and the parachute canopy barely deployed before he touched the ground. On completion of the course, successful candidates were awarded a small enamelled parachute badge which, though unofficial, was permitted on military uniform.⁸²

In September 1937 the Poles formed a parachute sabotage and diversion force, and established a Military Parachuting Centre at Bydgoszcz in May 1939. Entry was open to volunteers of all ranks, and the Centre was also tasked with research and development work. The first course of trainees graduated in June 1939, but the German invasion on 1 September 1939 caused the second course to be cut short. The Centre was destroyed in the fighting, and the graduates and staff were dispersed.⁸³ As we shall see, this was to prove fortuitous for the establishment of a British airborne force, for at least some of these men and their invaluable expertise eventually wound up in Britain after the debacles in France and Norway.⁸⁴

The other large-scale proponent of airborne warfare after the Soviets in the inter-war period was Hitler's Germany. The inspiration for German airborne development is unclear. One secondary source claims that Hermann Goering, future head of the *Luftwaffe*,⁸⁵ and Kurt Student, future commander of the *Luftwaffe*'s airborne arm, attended a Soviet tactical parachute demonstration in 1931.⁸⁶ Whilst convenient, this is problematic, for Goering was not a serving officer at that time, and it is therefore difficult to see why he would be allowed to participate in the highly secret liaison between the *Reichswehr* and the Red Army under the Rapallo Treaty of 1922. Student's presence is also difficult to reconcile. He was involved in the air side of the Soviet-German liaison,⁸⁷ but his involvement ceased in December 1928 when he was posted to an infantry unit in East Prussia to gain command experience.⁸⁸ That is not to say that the German military was unaware of Soviet airborne developments. Future *Panzer* expert Erich von Manstein, for example, witnessed a parachute exercise in the Trans-Caucasian Military District in September 1932.⁸⁹ It therefore appears likely the airborne idea was transmitted to Germany as a result of German-Soviet military co-operation prior to Hitler assuming power in 1933.

Goering's attendance at Soviet airborne demonstrations may be questionable but he was responsible for setting up the first German parachute unit, in February 1933.⁹⁰ Police Group Wecke was a para-military Prussian police unit, which was integrated into the *Luftwaffe*'s Hermann Goering Regiment in March 1935. One battalion of the regiment was to be parachute trained, and six hundred volunteers came forward despite a less than inspiring parachute demonstration on 1 October 1935, which left the sole participant injured and unconscious.⁹¹ German Airborne Forces proper were officially established on 29 January 1936, when a *Luftwaffe* Order of the Day called for volunteers for parachute training.⁹² A *Luftwaffe* training school was set up at Stendahl, and training commenced on 11 May 1936.⁹³ A platoon of *Luftwaffe* paratroops participated in manoeuvres in Saxony in October 1936, and a larger detachment carried out a demonstration before Hitler in the

spring of 1937. In the spring of 1937 the *Heer* formed its own parachute company,⁹⁴ which was expanded to a battalion in June 1938.⁹⁵ *Heer* interest was prompted as much by inter-service rivalry as any recognition of the potential of airborne forces, although a lack of facilities obliged the *Heer* to send its men to Stendahl for training by the *Luftwaffe*. The *Heer* parachute company also participated in the spring 1937 parachute demonstration for Hitler.

The future of the new arm remained unclear until the projected invasion of Czechoslovakia in 1938, for which the airborne force was tasked to attack fixed Czech defences around Freudenthal. Student was given command of the venture on 1 June 1938, with all planning and preparation to be complete by 15 September. On 1 July 1938, the *Luftwaffe* 7th *Flieger* division was established as an umbrella organisation for all units involved, and Student reported his new command combat ready on 1 September 1938. The Munich Agreement obviated the need for combat operations, which was probably just as well for Student and his fledgling airborne force. The *Heer* refused to provide as many troops as Student requested, obliging the hasty substitution of virtually untrained *Sturmabteilung* (SA) personnel as a stopgap.⁹⁶ The *Heer* promptly removed its parachute battalion and other troops from Student's control immediately the Munich Crisis passed.⁹⁷

Inter-service bloody-mindedness undoubtedly played a part in this, but there was also genuine disagreement between the two services over the projected employment of the new airborne force. There were three differing views on this. The original *Luftwaffe* concept saw paratroops as a small-scale sabotage force, to strike at targets inaccessible to attack by bomber aircraft. The *Heer*, on the other hand, saw airborne operations as an adjunct to support ground operations. In this scheme, paratroops were a spearhead to seize suitable landing grounds for the air landing of larger units of troops.⁹⁸ The third, and most radical alternative, was put forward by Student himself. This envisaged "an integrated airborne unit with its own transport aircraft, air support, [and] artillery",⁹⁹ operating under a tactical doctrine labelled the "drops of oil" technique.¹⁰⁰ This advocated the simultaneous seizure of multiple landing sites in order to dilute the enemy defence, which would form air-supplied pockets behind enemy lines. These pockets would then expand and link up with each other, and then with advancing ground forces.

Student's ideas were radical, but their originality is less certain. They bear an uncanny resemblance to Tatarchenko's 1932 paper "Technical, Organisational, and Operational Questions of Air Assault Forces",¹⁰¹ whilst the drops of oil analogy harks back to the French colonial "strategy of the oil patch", formulated and implemented in Morocco by

Marshal Lyautey before the First World War.¹⁰² That is not to say that Student's ideas were invalid, but merely that they are not as original than they are routinely portrayed. Be that as it may, German airborne doctrine eventually became a compromise between these three views, whilst Student succeeded in bringing all airborne matters under his personal control. This was achieved with some astute political manoeuvring, including a carefully stage-managed air-landing exercise during the occupation of the Sudetenland in October 1938. It involved two hundred and forty-two transport aircraft, and impressed Goering into continuing his support.¹⁰³

Such high level support proved crucial when the *Heer* withdrew its parachute battalion from 7th *Flieger* division in the aftermath of the Munich Crisis. By January 1939, when Student became Inspector General of Airborne Forces, the *Heer's* parachute battalion had been permanently incorporated into the *Luftwaffe*, and its specially trained 22nd *Luftlande* division was also placed under Student's operational control.¹⁰⁴ At the same time an OKW directive established the projected role of the airborne force,¹⁰⁵ which was an amalgam of the three differing concepts cited above. It was this force and doctrine which carried out the operations in Norway and the Low Countries in 1940, and which in turn inspired Churchill to order the formation of a British force with similar capabilities. Given this, it is illuminating briefly to compare and contrast the development of the German and British forces.

Whilst their development ran parallel in many ways, there were also significant differences between the two. There was, for example, no British parallel to the political dimension present in German Airborne Forces. The nature of the Nazi regime made some degree of political influence inevitable, and the fact that Goering was a high-ranking Nazi as well as commander of the *Luftwaffe* also had some bearing on the complexion of the German Airborne Forces. In addition, the original German parachute cadre was drawn from a Nazi oriented para-military police unit. It is no accident that German airborne troops featured prominently in Nazi propaganda, and there is evidence to suggest that they carried consequent attitudes onto the battlefield, the widespread perception of German airborne troops as a hard fighting but chivalrous foe notwithstanding.¹⁰⁶

The German airborne force also differed from the British in its operational set up. German airborne troops were all *Luftwaffe* personnel, and remained under *Luftwaffe* operational control until they linked up with ground forces. They then came temporarily under tactical control of those forces, but only until they could be withdrawn from the battle area. This was the opposite of the British arrangement, under which airborne troops

remained an Army responsibility, coming under RAF control only for specialist training and transportation purposes.¹⁰⁷ Both systems had advantages and drawbacks in roughly equal measure. Being an integral part of an air force, for example, allowed German Airborne Forces access to suitable aircraft in sufficient numbers, a matter which proved a major stumbling block to the British, particularly in the early stages of their development. The *Luftwaffe* possessed large numbers of Junkers 52 aircraft and their obsolescence as bombers coincided neatly with the new airborne arm's requirement for a suitable transport aircraft. The RAF possessed aircraft of similar capabilities, such as the Bristol Bombay and Handley Page Harrow,¹⁰⁸ as a result of the RAF inter-war practice of acquiring aircraft with a dual bomber/transport function. However, there were nowhere near as many British machines, and more importantly the RAF proved disinclined to provide aircraft for airborne use, much in the same way as the *Heer* had been unwilling to part with its soldiers for fanciful airborne experiments. The results of this RAF intransigence were to dog the development, and to a lesser extent the employment, of British airborne troops throughout the Second World War.

The German and British airborne examples were more similar in other areas. Both employed gliders as well as parachute troops, in the British case largely as an accidental by-product of RAF obstructionism.¹⁰⁹ Gliders nonetheless became an important part of British airborne doctrine, with the *coup-de-main* operation to secure the Orne River and canal crossings on the eve of the invasion of Normandy in June 1944 being a famous case in point.¹¹⁰ The Germans' adoption of the medium was made much easier by state sponsorship of sport gliding, along the same lines as the *Oasviakhim* and *Komsomol* organisations in the Soviet Union and the LOPP in Poland. The specific German motivation was to circumvent the Versailles restrictions on the training of military pilots, and Student's experience in this regard alerted him to the possibilities gliders offered over parachutes for troop insertion. In particular, they offered a precision means to deliver cohesive parties of troops to a specific point. Student commissioned the German Research Institute for Gliding to produce a suitable troop-carrying design, and personally test flew the resulting prototype Gotha DFS 230.¹¹¹ Student considered gliders especially suitable for special operations, and established a glider assault regiment as "...the elite of the parachute forces",¹¹² a status Assault Detachment Koch justified in May 1940.¹¹³ In this instance, it would also appear Student's thinking was original, for the German glider success in 1940 prompted the Red Army to include "Glider Groups" in a 1940 Airborne Brigade organisation.¹¹⁴

An even more crucial parallel between German and British airborne forces was the fact that they shared high level political support. As we have seen, Churchill first mooted the basic idea in 1917, and was instrumental in the establishment of the British airborne force in mid-1940. Hitler shared Churchill's keen advocacy of airborne warfare, at least until Crete. The source of Hitler's enthusiasm is unclear, although it is possible that he viewed airborne forces as a technologically updated version of the elite storm troop units he is likely to have witnessed in action in the trenches during the First World War.¹¹⁵ Churchill also appears to have regarded German airborne troops in the same light. In an enquiry on 19 June 1940 he recommended emulating "...the idea of storm troops, which had been made use of so successfully by the Germans".¹¹⁶ The date and context of this comment indicates that he was referring to the recent activities of German airborne troops in the Low Countries.

This interpretation was largely correct, for it can be argued that the role played by the new German airborne force in the Low Countries and after paralleled that of their First World War forebears, apart from the former's spectacular method of delivery to the battlefield. Both were specially configured, trained and equipped all-arms forces tasked to ease the passage of more conventional forces through enemy defences, which neatly encapsulates the underlying aim of the varying missions assigned to German airborne troops in May 1940. That said, it also appears that Hitler also viewed both forces through an ideological prism, as clearly illustrated by the tone of his specially formulated "Ten Commandments" for Student's *Fallschirmjäger*.¹¹⁷ The Commandments urged German parachute troops to consider battle as a personal fulfilment, to display individual initiative, resolute action and die rather than surrender, as well as to be "...as agile as a greyhound, as tough as leather, as hard as Krupp steel...and [thus] be the German warrior incarnate".¹¹⁸ Such language is redolent of the nihilistic, pseudo-Nietzschean attitudes displayed by storm-troops during the First World War,¹¹⁹ which found a strong echo in Nazi ideology via the post-1918 *Freikorps*.

Be that as it may, Hitler unilaterally decided to spearhead the German offensive in the West with airborne operations, which Student was informed of on 27 October 1939. Hitler proposed to spearhead a thrust into neutral Holland and Belgium with two airborne operations, on the grounds that "...parachute and air-landing troops were a new and unknown weapon, capable of dealing a knock-out blow if used with strength and boldness at a decisive point".¹²⁰ This multifaceted plan provided the template with which German airborne forces were to make history in May 1940, and also acted as the catalyst for the establishment of a similar British force.

Thus, in the twenty years after the end of the First World War, the transportation and deployment of troops by air shifted from an occasional experiment to a widespread military staple. For the first decade the British military enjoyed a significant lead, but began to slip increasingly behind the Soviets, and then the Germans, through the 1930s. This was overwhelmingly because the latter went on to develop dedicated units, techniques and equipment which added a truly tactical dimension to the air landing idea. The next chapter will therefore examine this apparent British anomaly, in order to establish why the British forces did not capitalise better upon their initial lead, and take the logical steps followed by the Soviets and Germans themselves.

Notes

- ¹ quoted from Michael Hickey, *Out of the Sky*, p. 9. Given Churchill's background and early and enthusiastic sponsorship of air power, it is possible that Franklin's comment influenced the 1940 call for 5,000 parachute and glider troops.
- ² quoted from John H. Morrow Jr, *The Great War in the Air*, p. 72
- ³ Lee Kennett, *The First Air War 1914-1918* (New York: Free Press, 1991), p. 57
- ⁴ *Kagohl* is an abbreviation for *Kampfgeschwadern der OHL*, literally "Battle Squadrons of the High Command", a title which illustrates the strategic nature of the units projected operations; see Morrow (*Great War in the Air*), p. 149; and Peter Kilduff, *Germany's First Air Force*, pp. 68-70
- ⁵ quoted from John H. Morrow Jr, *German Air Power*, pp. 116-117; see also Kilduff, pp. 70-74
- ⁶ Kennett, p. 46
- ⁷ for the origins of this policy, see Malcolm Cooper *The Birth of Independent Air Power*, pp. 14-15
- ⁸ R. D. Layman, *Naval Aviation in the First World War*, pp. 67-68
- ⁹ Morrow (*Great War in the Air*), pp. 122-123
- ¹⁰ for details, see Layman, pp. 74-75; and Morrow (*Great War in the Air*), pp. 243-244
- ¹¹ Morrow (*Great War in the Air*), p. 319; and Cooper, pp. 131-132
- ¹² figures quoted from Morrow (*Great War in the Air*), p. 322; for a contemporary account of the activities of the Independent Force, see Sir Walter Raleigh and H. A. Jones, *The War in the Air*, pp. 135-164
- ¹³ Morrow (*Great War in the Air*), p. 320; and Kennett, p. 99
- ¹⁴ for the British angle, see Roderick Grant and Christopher Cole *But Not in Anger*, pp. 16-17; for the wider view, see for example Kennett, p. 36
- ¹⁵ according to one secondary source, "...the French, Italians and Russians all dropped reconnaissance and sabotage teams [by parachute] behind Austro-German lines in 1916-18", but such a development does not appear in any of the other material examined; see Bruce Quarrie, *Airborne Assault*, p. 28
- ¹⁶ Raleigh and Jones, Volume V, pp. 278-280; for a more detailed account, complete with contemporary photographs of the aircraft engaged in the effort, see Grant and Cole, pp. 7-14
- ¹⁷ Christopher Cole (Ed), *Royal Air Force Communiqués 1918*, p. 208
- ¹⁸ Grant & Cole, pp. 14-16

¹⁹ quoted from Hickey, p. 13

²⁰ for details of Mitchell's scheme, see for example Hickey, pp. 13-14; and Tugwell, p. 18. Incidentally, Mitchell's assistant in formulating the venture was then-Major Lewis H. Brereton, who as a USAAF Lieutenant-General was to command the four division strong 1st Allied Airborne Army in 1944

²¹ quoted from Maurice Tugwell, *Airborne to Battle*, p. 18

²² the paper is reproduced in Vernon Blunt, *The Use of Airpower*, pp. 163-169, especially pp. 168-169

²³ for a detailed account of this, see Jafna L. Cox, "A Splendid Training Ground: The Importance to the Royal Air Force of its Role in Iraq, 1919-32", *The Journal of Imperial and Commonwealth History*, Volume 13, No. 1 (October 1984), pp. 157-184, especially pp. 157-167

²⁴ quoted from Cooper, p. 154

²⁵ two squadrons of O/400s, totalling fifty-one aircraft, were despatched to Egypt, and in the period April to October 1919 fifteen were written-off in accidents, whilst several more were damaged and eight crew members were killed; see Grant and Cole, p. 41

²⁶ *ibid.*, pp. 41-44

²⁷ for details of "Z Squadron", see David E Omissi, *Air Power and Colonial Control*, pp. 14-17; and Philip Towle, *Pilots and Rebels*, p. 12

²⁸ Grant and Cole, pp. 91-94

²⁹ quoted from Captain R. G. Thurburn, "The Operations in South Kurdistan, March - May 1923", *The Army Quarterly* Volume 31 (October 1935-January 1936), p. 275

³⁰ for details of RAF air ambulance activity, see Grant and Cole, pp. 91-99

³¹ *ibid.*, p. 56

³² for a detailed account, see *ibid.*, pp. 71-80

³³ *ibid.*, p. 54.

³⁴ *ibid.*, pp. 44-45; and Tugwell, p. 21; for aircraft details, see Owen Thetford, *Aircraft of the Royal Air Force*

³⁵ PRO File AIR 5/1253, Chapters 9 & 12; Omissi, p. 72; and Grant and Cole, pp. 57-65

³⁶ quoted from Grant and Cole, p. 66

³⁷ for contemporary comment see PRO File AIR 5/1255, Chapter 35; and Captain J. R. Kennedy MC, RA (Retd.) *This, Our Army*, pp. 149-150; see also Omissi, p. 72, and Grant and Cole, p. 66; for aircraft details see Thetford, pp. 513-514

³⁸ Grant and Cole, p. 80

³⁹ *ibid.*, pp. 80-83

⁴⁰ see for example Louis Allen, *Burma: The Longest War*, pp. 242-244, 318-320, 324-325

⁴¹ for a contemporary reference, see "Notes of the Week", *The United Services Review*, (14 April 1938), p. 4; see also Grant and Cole, p. 90. The latter work also contains a photograph of the Coldstream detachment emplaning; see facing p. 90

⁴² Lt. Col. James A. Bassett, "Past Airborne Employment", *Journal of Military History*, Volume 12, No. 4, Winter 1948, pp. 206-207

⁴³ F. O. Mischke, *Paratroops*, p. 22

⁴⁴ Col. David M. Glantz, *The History of Soviet Airborne Forces*, p. 4

⁴⁵ details of this operation were kindly supplied via personal communication by Professor John Erickson, University of Edinburgh, following a written enquiry

⁴⁶ the word "*basmach*" originates from the Turkic word "*basmak*", which means "ambush, raid or attack"; the implication here is clearly someone who is a brigand, a raider, or a marauder. The accounts of most contemporaries – both Russian and Western – suggest the existence of Basmachi marauders. Brigandage was an endemic problem associated with the general decline of Turkestan. Joseph Castagne's account, one of the earliest in any Western language, tells us the Basmachi were a motley assortment of common criminals that "the Provisional Government of Russia let loose upon society by opening wide its prison doors." Yet by the end of 1917, with the situation in all Turkestan so confused and restless, the native peasant masses unwittingly raised them [the Basmachi] to the level of *mujahedeen*, or holy warriors, regarding them as folk heroes; see Miron Rezun, *Intrigue and War in Southwest Asia: The Struggle for Supremacy from Central Asia to Iraq*, p. 17

⁴⁷ A. Borisov, "Desant onto the Sand in Aircraft", *Vestnik vozdushnovo flota* (January 1929) pp. 11-13; for a less detailed contemporary account that may well be describing the same operation see A. N. Lapchinskiy "Airborne Landings", *Voyna i Revolyutsiya* (1930) Book 6, as printed in A. B. Kadishev (Ed) *Voprosy Taktiki v Sovetskikh Voyennykh Trudakh 1917-1940* (Moscow: Voenizdat, 1970), pp. 348-354: cited in H.F. Scott and W.F. Scott (Eds.), *The Soviet Art of War*, pp. 64-65. I am indebted to Mr James Sterrett for locating and translating the Borisov article

⁴⁸ for details see Col. N. Ramanichev, "The Development of the Theory and Practice of the Combat Use of Airlanding Forces in the Inter-War Period", *Military-Historical Journal*, No. 10 (October 1982), p. 72 (Russian language publication), which is also cited in Glantz, p. 4. I am again indebted to Professor Erickson for providing a copy of the Ramanichev article, and to Mr James Sterrett for translating it.

⁴⁹ Glantz, p. 5

⁵⁰ *ibid.*, pp. 4-7

⁵¹ *ibid.*, pp. 11-12

⁵² Scott, p. 65

⁵³ for a detailed account of these pioneering jumps, see Gerard M. Devlin, *Paratrooper!*, pp. 7-13. A photograph of Berry just after leaving the aircraft is reproduced on p. 12

⁵⁴ see Quarrie (*Airborne Assault*), pp. 26-28

⁵⁵ *ibid.*, p. 28

⁵⁶ Grant & Cole, pp. 16-17

⁵⁷ Omissi, p. 72

⁵⁸ quoted from Thurburn, p. 270

⁵⁹ see Grant & Cole, pp. 80-83

⁶⁰ see Morrow (*Great War in the Air*), p. 239

⁶¹ see Quarrie (*Airborne Assault*), p. 27

⁶² for a contemporary reference, see "Notes of the Week", *The United Services Review*, (16 June 1938), p. 3

⁶³ see Glantz, pp. 5-7

⁶⁴ *ibid.*, p. 11

⁶⁵ footage from the Soviet 1935 manoeuvres at Kiev, which included parachute and air landed troops in action, was shown to a selected audience at the Soviet Embassy in London in early 1936, and was included in

newsreel films shown throughout the world; for a contemporary reference to the embassy "premier", see "Soviet Film of Kiev Manoeuvres", *The Army, Navy and Air Force Gazette*, Vol. LXXVII (12 March 1936), p. 206; and Hickey, p. 15

⁶⁶ Glantz, pp. 17-20

⁶⁷ *ibid.*, p. 20

⁶⁸ *ibid.*, pp. 20-22

⁶⁹ quoted from *ibid.*, p. 27

⁷⁰ Hickey, p. 15; and Glantz, p. 13

⁷¹ Mischke, p. 17

⁷² Glantz, p. 44 and Figure 13, "Airborne Corps Dispositions, June 1941", p. 45

⁷³ Glantz, pp. 8-9

⁷⁴ for details of the 1936 Field Service Regulations, see Richard Simpkin, *Deep Battle*, especially Chapters. 12-16.

⁷⁵ quoted from Glantz, p. 32

⁷⁶ for details, see Alvin D. Coox, *Nomonhan*, Chapter 30

⁷⁷ Glantz, pp. 38-39

⁷⁸ see Mischke, p. 19

⁷⁹ see "Notes of the Week", *The United Services Review* Vol. LXXVII (10 December 1936), p. 1; and Maj.- Gen. H. Rowan Robinson, "Air Infantry: How Can This Development Assist Great Britain?", in *ibid.*, (17 December 1936), pp. 5-6

⁸⁰ opinion expressed by Lt - Col. Jan Jozef Lorys (retd.), during an interview conducted at the Polish Institute and Sikorski Museum, Prince's Gate, London, on 16 June 1998. Col. Lorys participated in parachute training as an officer cadet in Poland before 1939, and later served with the 1st Polish Independent Parachute Brigade, including a liaison tour to observe airborne training in the United States. I am indebted to both Col. Lorys and his wife, whose assistance proved invaluable in translating the present authors regional English accent, and also to Mr Andrzej Suchcitz, Keeper of Archives at The Polish Institute and Sikorski Museum, for both making the interview possible, and locating relevant files from his archive

⁸¹ see George F. Cholewczynski, *Poles Apart*, p. 47. Cholewczynski supports Lorys' osmosis theory by making no direct reference to the Soviet example despite the obvious similarities, although this could merely be a result of traditional Russo-Polish antipathy.

⁸² details from interview with Col. Lorys, 16/06/98

⁸³ Cholewczynski, p.47.

⁸⁴ *ibid.*, p. 47

⁸⁵ *Luftwaffe* (literally Air-Weapon or Air-Arm) was the title of the German Air Force after Hitler's seizure of power in 1933

⁸⁶ Quarrie (*Airborne Assault*), p. 29

⁸⁷ for details of Student's involvement, see Manfred Zeidler, *Reichswehr und Rote Armee 1920-1933*, pp. 71, 107, 138-140, 161, 174, 272. I am indebted to Professor Hew Strachan, University of Glasgow, for drawing my attention to this work, and for taking the time to translate the appropriate sections.

⁸⁸ Callum Macdonald, *The Lost Battle*, p. 9

⁸⁹ Zeidler, p. 215

⁹⁰ James Lucas, *Storming Eagles*, pp. 16-17; and Hickey, p. 18

⁹¹ MacDonald, pp. 11-12; and Bruce Quarrie, *German Airborne Troops*, p. 5

⁹² Lucas, p. 17; and Quarrie (*German Airborne Troops*), pp. 5-6

⁹³ Lucas, p.18

⁹⁴ *Heer* was the title of the German Army after 1933; the *Heer*, *Luftwaffe* and *Kriegsmarine* (the post-1933 title of the German Navy) operated under the blanket title of *Wehrmacht*, or Armed Forces

⁹⁵ the date of this unit's establishment is somewhat confused. According to Quarrie, the *Heer* unit was formed in 1936, whereas Lucas claims it was not authorised until 1937; the discrepancy is presumably due to the time lapse between the formulation of orders and their practical implementation; see Quarrie (*German Airborne Troops*), p. 6; and Lucas, p.18

⁹⁶ the SA was originally the mass military arm of the Nazi Party, but reverted largely to a ceremonial role following the purging of its leadership by Hitler in 1933

⁹⁷ MacDonald, pp. 13-14; and Hickey, pp. 19-21

⁹⁸ Lucas, pp. 19-20

⁹⁹ quoted from MacDonald, p. 13

¹⁰⁰ Lucas, p. 20

¹⁰¹ Glantz, p. 9

¹⁰² quoted from Jean Gottman, "Bugeaud, Gallieni, Lyautey: The Development of French Colonial Warfare", in Edward Meade Earle (Ed), *Makers of Modern Strategy*, p. 248

¹⁰³ MacDonald, pp. 14-15

¹⁰⁴ *ibid.*, p. 15; for details of the 22nd *Luflande* division, see Lucas, pp. 19-21; and Hickey, p. 21

¹⁰⁵ OKW is an acronym for *Oberkommando der Wehrmacht*, or Armed Forces High Command, which functioned as an umbrella organisation for the individual armed service high command organs

¹⁰⁶ MacDonald presents a brief but compelling reappraisal of the political element regarding German Airborne Forces; see MacDonald, pp. 18, 304-306

¹⁰⁷ Lucas, p. 20; and Otway, p. 26

¹⁰⁸ for details of the Bombay and Harrow, see Thetford, pp. 136-137, 310-312

¹⁰⁹ the idea of using gliders originated with the RAF, not the Army, and there is evidence to suggest that the RAF was not serious and only made the suggestion as a short term tactic for its own devices, an argument presented more fully below; for the original RAF proposal, see PRO File CAB 120/262, doc. 14B, paper "Present Situation in Respect of the Development of Parachute Training", from AM Plans Dept., dated 12/08/1940

¹¹⁰ see for example Otway, pp. 173-174; for more detailed accounts see Stephen E. Ambrose, *Pegasus Bridge*; and Kevin Shannon, *One Night in June*

¹¹¹ the DFS 230, which could carry ten men including a pilot and co-pilot, became the standard German assault glider used in the Second World War; for details see Lucas, pp. 370-371

¹¹² MacDonald, pp. 16-17

¹¹³ this Detachment was drawn from the assault regiment for this operation, which is covered more fully below; for a detailed account, see James Mrazek, **The Fall of Eben Emael**; see also MacDonald, pp. 31-33; and Lucas, pp. 36-46

¹¹⁴ Glantz, pp. 41-43, especially the organisation details on p. 43

¹¹⁵ according to recent research, Storm-Troop techniques were disseminated and practised throughout the German Army on the Western Front during the First World War, and it is therefore highly likely that Hitler came across such troops during his front-line service in that conflict; for details see Bruce I. Godmundsson, **Storm Tactics**, pp. 50, 77-78; and Martin Samuels, **Doctrine and Dogma**, pp. 19-27. Incidentally, Godmundsson also likens First World War storm-troops to German airborne troops, specifically Assault Detachment Koch in the latter's assault upon Eben Emael; see Godmundsson, pp. xi - xii, and footnote 1, p. xvii

¹¹⁶ PRO File CAB 69/1, Defence Committee minutes, dated 19/06/1940; cited in Martin Gilbert, **The Churchill War Papers, Volume II**, p. 372

¹¹⁷ *Fallschirmjager* is the German term for paratrooper; literally, "parachute-hunter"

¹¹⁸ for the Commandments in full, see Hickey, pp. 21-22

¹¹⁹ for a vivid participant account illustrative of such attitudes see Ernst Junger, **The Storm of Steel**

¹²⁰ quoted from MacDonald, p. 25

CHAPTER TWO

A Question of Resources, Need and Suitability: Why the British Lead in Air Transportation Lapsed In the 1930s

British forces were the world leaders in moving and supplying troops by air in the first decade after the First World War, yet within a further ten years they had been left far behind by Soviet and German airborne development. On the surface, this is puzzling. Their initial lead meant that British forces possessed sufficient equipment and expertise to match these developments and create their own dedicated airborne force. In addition, imperial policing, which was the primary role of the British military in the inter-war period, appears to be simultaneously a perfect justification for the creation of, and a tailor-made role for, such a force. The omission cannot be because they were unaware of developments elsewhere. British officers attended the widely publicised Soviet airborne demonstrations in the mid-1930s, and Winston Churchill hypothesised about an airborne invasion of Britain in June 1936.¹ British intelligence monitored German developments,² and The United Services Review published a photo-essay featuring German paratroopers making training jumps from a Junkers 52 aircraft in October 1938.³

The British failure to capitalise on their airborne lead cannot therefore have been due to a lack of expertise, or ignorance of the tactical and operational possibilities of transporting troops by air. Rather, there was a set of specifically British circumstances that militated against further British development of the airborne idea, and by extension, the establishment of a dedicated British airborne force. This chapter will therefore argue that the lapse was due to the same factors that concurrently hampered armoured and mechanised development in the British Army; a combination of government parsimony and Army overstretch. An additional factor specifically applicable in the airborne case was high level RAF intransigence, which also ruled out official Army-RAF airborne co-operation. In addition, it will also show that the subject was not totally neglected by British military thinkers, and that low-level co-operation between the Army and RAF in the empire laid an invaluable foundation when the British acted to make up lost ground.

1. A Poor Climate For Innovation: Government Parsimony and the British Military in the Inter-War Period

First, there is the matter of cost. Providing the necessary equipment for a dedicated airborne force was, and remains, a comparatively expensive business. This was less of a problem for the Soviets and Germans, because both incorporated their airborne effort into much wider rearmament programmes. This, however, was not the case in Britain, where

governments of all political persuasions pursued a consistent policy of pursuing fiscal savings at the expense of the armed services through most of the inter-war period. The tone for this was set in August 1919, in a memo which declared that "...non-productive employment of manpower and expenditure, such as is involved by naval, military and air effort, must be reduced within the narrow limits consistent with national safety".⁴

Government parsimony was possibly justifiable in the immediate post-war period, but the its view of narrow limits and national safety differed considerably from that of the military. This continued to be the case until the mid-1930s, when it was belatedly acknowledged that Britain was "...approaching a point when we are not possessed of the necessary means of defending ourselves against an aggressor".⁵

As a result, for most of the inter-war period there was barely sufficient money available to cover the three services' existing commitments. The Army, for example, had its budget reduced every year between 1919 and 1932.⁶ The situation was exacerbated further by the status of the RAF as an independent service. This introduced an additional technology-based, and therefore expensive, competitor for what funding was available. Given this, it can be argued that the British lost their airborne lead because they lacked the finance to maintain it. The requisite research and development alone would have imposed an additional, possibly unsustainable, burden upon already overstretched budgets.

Consequently, the establishment of a dedicated airborne force did not figure in the Army or RAF's list of priorities. That said, the RAF showed a little interest in airborne forces in a combined operations context after the Inter-Service Training and Development Centre (ISTDC) was set up in 1937.⁷ This is discussed in more detail in Chapter Four below.

The paucity of funding argument, whilst crucial, is not the whole story however. The Army succeeded in stretching its fiscal resources to include high-tech research and development in armoured and mechanised forces in the late 1920s, for example.⁸ Indeed, from a purely fiscal perspective, the establishment of a dedicated airborne force could have been presented as a cost-saving measure, for such a force located in the Middle East could have provided a useful force multiplier for imperial policing. In the event, the Army and RAF showed little interest in the matter, jointly or individually, and the reasons for this omission must be sought in the specific circumstances and attitudes of the Army and the RAF in the inter-war period.

II. Undermanned, Overstretched and in Need of Renovation: The Army in the Inter-War Period

In addition to financial strictures, the Army's lack of interest in establishing a dedicated airborne force undoubtedly resulted in part from a shortage of manpower, which impacted most heavily on the infantry. Whilst that arm increased from 49.5 per cent to 52.6 per cent of the Army as a whole between 1918 and 1935,⁹ this was more than offset by a parallel increase in the Army's commitments.¹⁰ The primary role of the Army in the inter-war period was imperial policing, which fell most heavily on the infantry. The creation of an airborne force would therefore have imposed an additional, and possibly unbearable, strain upon an already hard-pressed arm. An alternative would have been to re-assign serving troops from other arms to the infantry, but this would have undoubtedly prompted stiff resistance from them, in the same way that the cavalry bitterly resisted mechanisation. The most logical approach, to establish the airborne force as an independent arm, was precluded by the same financial strictures that helped to produce the manpower problem in the first place. Even then, the infantry would have been the most logical source of manpower, which would doubtless have also prompted stiff resistance from within the tribal structure of that arm. The tenacity with which trained paratroopers of the original British parachute battalions clung to their regimental distinctions, until the enforced adoption of the maroon beret and Parachute Regiment cap badge in mid-1942, provides a clear and relevant example of such tendencies.¹¹

The Army's manpower problem was not solely due to expanded commitments. By the mid-1930s, the Army was finding it increasingly difficult to obtain sufficient recruits, despite the poor economic climate. This provoked a heated debate amongst military pundits, who identified a variety of contributing and often contradictory factors for the Army's recruiting problems. In 1935, an article in *The Army Quarterly* by Lieutenant-Colonel Graham Seton-Hutchinson listed factors detrimental to voluntary Army recruitment. These included poorly-presented, sport-oriented recruiting posters which "insulted the intelligence of the potential recruit"; the disparity between equivalent civilian opportunities and an Army career, particularly for Other Ranks; and dissatisfaction with the obligation for Reserve Service after discharge being included in the Army's Short Service System.¹² Another article by a Captain Telfer claimed the Army was obsessed with "trivial parades", recruited from the "starving and idiots", and presided over by "antique" commanders. In addition, Telfer also blamed recruiting problems on the difficulties faced by ex-soldiers in the labour market after leaving the service, and the "glamour" of the RAF as a recruiting competitor.¹³ This in turn provoked a response from

Seton Hutchinson, and contributions from J. F. C. Fuller, and an anonymous spokesman for the Other Ranks, writing under the pseudonym "Decurion". The latter was also scathing about the Army's recruiting practices which, it was claimed, resulted in most recruits being unskilled "conscripts of necessity", with the remainder being "...youths looking for adventure...the sons of soldiers...or...derelicts from the higher classes".¹⁴

Parallel to this, the Army was also experiencing uncertainty over its training practices, and their relevance for future warfare. This too was a recurring theme in contemporary military debate, and sprang in part from the experiences of many of the commentators during the First World War. Seton Hutchinson, for example, opined that "...training [which] does not bear an exact relation to reality, or as close as can be without the shooting and the killing...is quite useless", and that "...the training of the Army concentrates upon the production of peacocks where it should produce panthers".¹⁵ The debate spilled over into the popular press. **The Times**, for example, ran a three-part article on the subject in November 1935.¹⁶ Whilst much of the debate dwelt on the need for reform in the Army as a whole,¹⁷ there was also a specific focus upon the need to reform the training and role of the infantry. This was due in part to perceived infantry shortcomings during the First World War, and presumably because the infantry constituted the single largest and most active component of the Army. Commentators on the subject included Fuller, in his 1932 **Lectures on F. S. R. III**,¹⁸ Liddell Hart's **The Future of Infantry** of the following year,¹⁹ and a host of less illustrious writers.²⁰

The need for reform was also recognised by some within the Army. Future Field Marshal Viscount Alanbrooke, for example, was so concerned with the low quality of tactical leadership he encountered during his command of 8th Infantry Brigade in 1934-5 that he set up a Brigade school to upgrade the tactical training of his platoon commanders. He also became a convinced and vociferous advocate for the establishment of a dedicated School of Infantry to regulate and centralise such training. Despite badgering the Director of Military Training (DMT) in 1935, and later gaining the support of all Infantry Brigadiers for such a venture during his own tenure as DMT the following year, he was unable to resolve the issue to his satisfaction at that time.²¹

Of course, all this need not have prevented the Army from at least examining the airborne idea. There were, however, two additional reasons that explain why this was not done. First, the Army was fully occupied with mechanisation, which left it little time or resources for deployment elsewhere.²² Second, and more germane, the Army had no direct access to aircraft. These remained firmly under control of the RAF, which was disinclined to lend

its resources for airborne research. Given this, it will also be necessary briefly to examine the condition and attitude of the RAF during the inter-war period.

III. Seeking Justification for Existence: The RAF in the Inter-War Period

The RAF became the world's first independent air arm, through the amalgamation of the RFC and RNAS, on 1 April 1918, complete with its own Air Ministry alongside the Admiralty and the War Office. It was "arguably the most effective air service in the world",²³ with 300,000 personnel serving two hundred front-line squadrons, and had accrued a huge amount of operational experience. Between July 1916 and the cessation of hostilities, RAF aircraft flew almost a million operational hours, dropped 6,942 tons of bombs, and expended 10.5 million rounds of ammunition on ground targets.²⁴ All this was not necessarily as impressive as it appears, however:

"Its [the RAF's] contribution to victory...was largely ancillary. Attempts to influence the course of the war through the direct use of airpower against tactical or strategic objectives had brought little return. Long-distance bombing of industrial targets in Germany...caused little damage or dislocation. Even when the German army began to retreat, British aircraft were unable to cause serious confusion in its ranks. The RAF's major contribution was to assist Haig to break through the Hindenburg Line by providing the same reconnaissance and observation facilities which had first brought the air service to prominence in the early years of the war."²⁵

In practical terms therefore, the hugely expanded British air service ended the war where it had begun. The Army and Royal Navy could fall back on their former imperial roles, but this was a luxury denied the fledgling RAF, whose survival was cast into doubt in the immediate post-1918 period by government fiscal stringency and the inter-service wrangling this provoked.

In the event, the RAF avoided extinction by creating an imperial policing role for itself, by "...substituting air power for land power in the more inaccessible corners of the British Empire."²⁶ This was encapsulated in the policy of Air Control, which was shrewdly and successfully sold by stressing the economies attainable by replacing manpower with technology. The first operation was a joint venture with the Army, to suppress the "Mad Mullah" in Somaliland in 1919-20. The RAF contribution was the eight aircraft strong Z Force. The supposed economy of the operation - a figure of £77,000 pounds is regularly and inaccurately quoted - was cited on a regular basis as justification for Air Control by the RAF. This figure conveniently overlooks the cost of the Army's not inconsiderable involvement in the campaign, however, which lasted three times longer than the RAF's,

and which almost doubled the price to £150,000.²⁷ Nonetheless, the strategy worked, for on 1 October 1922, after a considerable amount of political lobbying by Churchill as Secretary of State for War and Air, military responsibility for Iraq passed from the War Office to the Air Ministry.²⁸

The development of the RAF's pioneering air transport capabilities in the inter-war period therefore resulted from a series of coincidences. The size of the RAF's new fiefdom in Iraq demanded either very long-range bombing aircraft, or similarly capable transport aircraft to service smaller aircraft operating from remote locations. The focus on strategic bombing in the latter stages of the First World War meant the RAF possessed a pool of large bombers, which could be used for their original purpose, or modified as transports. This was the beginning of the RAF practice of issuing specifications for bomber/transport aircraft, which continued into the mid-1930s.²⁹ Thus it was Air Control that prompted the development of large transport aircraft, and which provided the conditions for their use. Even so, it is also significant that the powers that be did not regard Air Control as a total solution. Churchill was the RAF's staunchest political supporter at this time, but he still considered that policing Iraq would require some 14,000 troops.³⁰ The RAF decision to convert heavy bombers into transports may therefore have reflected this reality as much as a desire to supply RAF units. Nonetheless, the appearance of the RAF in Iraq encouraged the spread of "air mindedness" across the empire, as the benefits of air transportation became more widely recognised.

The lack of an integrated ground force was thus the Achilles heel of the Air Control policy,³¹ as shown by the formation of RAF armoured car units as a mobile ground back-up for their aerial activities.³² This graphically illustrates the limitations of pure air power even in the remote regions where Air Control was supposedly most applicable; hence Liddell Hart's comment that "Air-and-Armour Control" was a more appropriate title for the policy.³³ Given this, it would have been logical for the RAF to establish its own dedicated airborne force for rapid intervention. However, apart from the armoured car squadrons and small units raised locally for airfield defence, the RAF did not establish an integral ground force in the inter-war period, airborne or otherwise. There are several reasons for this. First, it would have provoked the Army. The RAF's foray into imperial policing was already impinging on the Army's traditional territory, and further trespass would have elicited fierce resistance, not least because it would probably have meant a concomitant reduction in the Army's funding. Such hostility undoubtedly assisted the pursuit of fiscal parsimony, but was hardly conducive to military efficiency or harmonious inter-service relations. In any case, the RAF was subject to the same fiscal restraint as the

Army, and it is difficult to see how the additional expenditure for an airborne force could have been justified to the Treasury or the War Office.

Second and more importantly, the RAF sold its Air Control policy by stressing the supposed economy of substituting aerial technology for manpower. This in itself ruled out the establishment of a sizeable ground force of any description by the RAF. The armoured car units could be justified as a security measure for downed aircraft and their crews, and in any case required relatively few personnel. It is therefore doubtful that the Air Ministry could have found sufficient manpower for anything larger, even if it had been so inclined. Such a development would not only have been duplication of the Army's function, but also an admission that Air Control was a flawed concept. It would also have undermined the RAF's carefully crafted image as a modern, high-tech force, and by extension have cast doubt upon the RAF's status as an independent service. Thus, a combination of doctrinal unpalatability and survival-driven pragmatism was sufficient to prevent the RAF from pre-empting Hitler's *Luftwaffe* by establishing the world's first airborne force under the control of an independent air arm.

The doctrinal angle is crucial, because just as the Army was preoccupied with mechanisation, so the RAF was preoccupied with aerial bombing. Bombing had occupied a central position in RAF thinking since 1918, it supplied the coercive element of Air Control, and the threat of bombing provided the RAF with a domestic justification for independence to set alongside its imperial policing role. This was in some ways a reorientation from the RFC's and RAF's primary role in the First World War, which came about not as a

“...revolution in the theorising about air power but [as] a slow and almost imperceptible shift from the orthodoxy of co-operation with the surface forces, on the model of the RFC on the Western Front, to the radical idea of strategic independence put forward in the 1930s.”³⁴

This coincided with a public “...fear of aerial bombardment in inter-war Britain [that] was unprecedented and unique”,³⁵ which bordered in some cases on hysteria, and reached a peak in the early to mid-1930s. This fear was based largely upon suspect extrapolations from German bombing during the First World War and current and sensationalised examples from China and latterly Spain, and was reinforced by alarmist writings.³⁶ It was encapsulated by Prime Minister Stanley Baldwin's oft misquoted claim that “the bomber will always get through”.³⁷

The RAF capitalised upon this to support its continued independence in two ways. First, it portrayed itself as an anti-bomber force, through the catch-all theory of Strategic Interception, formulated in the late 1920s. This was then gradually superseded by the RAF's own strategic bombing pretensions, which were complete by the latter half of the 1930s. Despite the lack of opportunity, the RAF never lost their original strategic focus, propounded from 1925 as the "knock-out blow" theory, which promoted the bomber to a strategic, war-winning weapon in its own right, allegedly capable of inflicting lethal damage to an enemy's war-making capacity.³⁸ However, this transition was neither straightforward nor sound, for it

"...took place without a reorientation of the fundamental military principles which might have made strategically independent air power a sound proposition for Britain. In particular, the British school of airpower never understood the significance of the classical concept of 'command of the air', and they came to rely instead on what was considered the unique power of the bomber to prepare the way for victory, virtually by ignoring the existence of the enemy air force as a strategic obstacle."³⁹

The flaws in this line of thinking were brutally exposed in the first days of war in 1939,⁴⁰ but the point here is to prove that the RAF's chosen method of waging war had no place for the creation of an integral ground force, airborne or otherwise. Strategic bombing was intended largely as a substitute for ground operations, and the establishment of an RAF force for terrestrial operations, even ones launched from the sky, was therefore heretical at worst and irrelevant at best. This attitude was to exert a malign influence on the establishment of a dedicated British airborne force.

The logical solution would have been for the Army and RAF to co-operate, if only because a united front was more likely to secure government approval. However, the Army resented the way the RAF had usurped its traditional imperial role, and remained suspicious of further trespass. The RAF, for its part, retained "...a tendency to look on the Royal Navy and the Army as wicked uncles who...might once again revert to predatory instincts".⁴¹ The result was a severe outbreak of inter-service rivalry, in which neither side was blameless. The RAF, for example, only formed its armoured car units after the Army refused to allow its own units to continue locally arranged co-operation with the RAF.⁴² In this specific case, the Army shot itself in the foot. As Omissi points out, War Office reluctance to place Army units under RAF control, even temporarily, lost the progressive elements in the Army the chance to use imperial policing as a lever for mechanisation, in the same way as the RAF used Air Control for its survival.⁴³

Inter-service rivalry, generated by government parsimony, and the resultant inward focus of Army and RAF activity were obstacles to the creation of a dedicated British airborne force in the inter-war period. However, this requires a significant caveat. Army-RAF hostility was rampant, but not across the board. In fact, it tended to diminish in direct proportion to the distance from Whitehall, which is why British forces in the empire led the world in military air transportation in the first decade after 1918. This paradox merits examination, because it was symptomatic of a less than obvious quality that was to play a crucial role in the establishment of a British airborne force after the summer of 1940.

IV. Operational Necessity as the Mother of Flexibility: Unofficial Army-RAF Co-operation in the Empire

The high level of enmity between the Air Ministry and War Office was not automatically reflected by the lower echelons of the Army and RAF, in the UK and, more especially, in the empire. There, relations could be most cordial, as illustrated in a letter from Martel to Liddell Hart in the mid-1930s: “The Air Force is a good show out here [in India]; I wish the Army was as progressive.”⁴⁴ Martel had reverted to his original Corps, the Royal Engineers (RE) after the First World War, and commanded the RE component of the Experimental Mechanised Force during its 1927 trials.⁴⁵ He was posted to King George's Own Bengal Sappers and Miners in April 1929, and served as an instructor to the Indian Staff College at Quetta between 1930 and 1934, where he taught mechanised warfare and air co-operation in addition to more traditional RE subjects.⁴⁶ Martel's wide-ranging experience illustrates that the key to this co-operation was an inherent flexibility in the lower levels of the Army and RAF, a quality that was to prove crucial in the establishment of a dedicated British airborne force in 1940. It will therefore be necessary to briefly examine why and how this flexibility occurred in the two services.

Flexibility is not a quality popularly associated with the British Army, and a veritable industry has grown up proclaiming exactly the opposite. The 1842 retreat from Kabul, the Crimea and both Boer Wars are recurring favourites,⁴⁷ but the performance of the Army in the First World War has drawn the most adverse comment,⁴⁸ and still excites debate.⁴⁹ However, this rather narrow and populist view overlooks a rich parallel seam of tactical and technological innovation driven by the Army's involvement in the empire. Service there obliged the Army to fight a myriad of campaigns, often with whatever forces were at hand, and frequently in extreme geographical and climatic conditions. This in turn obliged adjustments in training, tactics, organisation and equipment. Thus, far from being “merely

the play of children”,⁵⁰ the life-and-death reality of colonial warfare demanded operational flexibility of a high order.⁵¹

The creation of light infantry units in North America from the 1740s provides a good example of this.⁵² Fieldcraft and mobility were their prime attributes, and the concept was modified and employed in the American War of Independence with the creation of light companies within infantry units serving there. The concept was exported back to the Old World as a counter to the mass tactics of Revolutionary France, and became regularised with the creation of a separate light infantry arm during the Napoleonic Wars.⁵³ It was then employed on India's Northwest Frontier in the mid-Nineteenth century. There “...dispersion and Light Infantry skills became the order of the day as [British] Indian troops adapted to the irregular fighting methods...of the hill tribes”, leading to the establishment of the all-arms Punjab Frontier Force (PFF).⁵⁴ Thus, within a century a concept formulated in response to a specific set of conditions had spread into mainstream operations virtually everywhere the Army operated.

This was by no means an isolated example of such flexibility. Mounted infantry were introduced in an effort to enhance mobility in the vast open spaces of Egypt and South Africa,⁵⁵ and there are numerous examples of the Army enhancing its flexibility by adopting new technology. The PFF was equipped with specially designed lightweight artillery pieces,⁵⁶ the Royal Engineers (RE) deployed a traction-engine equipped “Steam Road Transport Company” in the Second Boer War,⁵⁷ and formed an “Air Battalion”, a forerunner of the RFC, in April 1911.⁵⁸ Indeed, it can be argued that the establishment of a British airborne force in 1940 was merely a continuation of this long-standing tendency, rather than a startlingly new development. Be that as it may, by the outbreak of the First World War the regular British Army had attained an extremely high level of operational flexibility, almost exclusively as a result of its service in the empire. In addition, the high-intensity and changing circumstances of the First World War enhanced the Army’s flexibility still further, in developing new practices and adopting new technology; the development and introduction of the tank is arguably the most famous and enduring example of this tendency.⁵⁹

It is also important to note that this flexibility was carried over into the Home Army after 1918, a point illustrated by the course of armoured and mechanised development in the 1920s. Popular interest in the activities of radical theorists like Fuller and Liddell Hart frequently overshadows the fact that the remainder of the Army was not entirely made up of hide-bound reactionaries, but included a leavening of officers who were open minded

but realistic with it. General Sir John Burnett-Stuart, for example, was originally a conventional infantry commander, but became a staunch advocate of paced mechanisation following the involvement of his 3rd Division in trials of the Experimental Mechanised Force in 1927.⁶⁰ There is also evidence that some officers in the cavalry, renowned as the bastion of conservatism, were also less blinkered than they are popularly portrayed. An article entitled “Mechanisation from a Cavalry Point of View” was published in the **Journal of the Royal United Service Institution**, and stressed the need for the cavalry to adapt to modern conditions via mechanisation.⁶¹ Indeed, the mere fact that trials with the all-arms Experimental Mechanised Force and its successor the Experimental Armoured Force were carried out in 1927 and 1928 is clear evidence of the Army's flexibility, especially given the prevailing financial climate.

The contention that service in the empire was the initial driver for the Army's flexibility is reinforced by the example of the RAF. The RAF originally intended to merely transfer its First World War practices into the new setting, but the empire imposed its own dynamics. As a result, the RAF was obliged to modify its attitude, and transportation in particular became a major focus of operations. The degree of this shift is illustrated by the fact that the RAF began to specify that new bomber aircraft should be easily converted for transport work from the early 1920s, and officially referred to its bombers as bomber/transports until the late 1930s. This label, however, merely referred to the ability of such aircraft to carry freight and/or passengers primarily for the RAF, rather than fully-equipped troops for the Army. The RAF was also obliged to establish its own ground security forces, and to co-operate more closely with the Army at the operational level. Thus, RAF exposure to the realities of operations in the empire rapidly forced a degree of flexibility, in much the same way and for much the same reasons as the Army before it.

Paradoxically, however, this flexibility is in itself evidence as to why British forces did not move to establish a dedicated airborne force before 1940. The Army was well used to adapting to meet specific operational requirements in the empire, and the elements of the RAF operating in the empire rapidly developed the same capacity. The degree of operational rapport between the two suggests that a small, dedicated airborne force of some description could have been established, if necessary without referring the matter to Whitehall. The elements necessary for such a development were certainly available. The Army could have found the manpower, while the RAF possessed aircraft capable of carrying parachutists from the early 1920s, and had access to the parachutes used increasingly for dropping supplies from at least 1923. Converting these parachutes to carry men would not have presented an insurmountable problem. Given all this, it can be argued

that there was a very simple reason why this seemingly logical step was not taken: there was simply no need for a dedicated airborne force. This is a rather trite answer, but a perfectly logical one, if viewed from a contemporary perspective. In order to prove this contention, it will be necessary to turn the coin, and investigate what benefits a dedicated airborne force could have offered over established practice. Before drawing any conclusions on this, however, it may be advisable by examining what British military theorists had to say about the airborne idea, to put the matter in context.

V. Hits and Misses: British Military Thinkers and the Airborne Idea In the Inter-War Period

Given their high profile as progressive military thinkers, it would be logical to look to Fuller and Liddell Hart for comment on the airborne idea. However, neither writer paid much attention to it, as an examination of their works published in the inter-war period shows. According to a writer on the former, “...Fuller doesn't seem to be very interested in airborne forces and hardly ever comments on them”.⁶² That said, he was at least aware of the military advantages and ramifications of air transportation. In his 1932 **Lectures on F. S. R. III**, Fuller referred to the air evacuation from Kabul in the 1928-1929. He considered this as holding “enormous military possibilities”, and predicted “[it] is not too much to suppose that considerable numbers of soldiers, supplies in bulk, and even scout tanks, will in the future be transported from place to place by air”.⁶³ Apart from this general comment, however, Fuller viewed bombing as the primary military role for aircraft, which he felt could have a more spectacular moral effect upon an enemy than a massed attack by tanks. He also opined that “...the tank and the aeroplane are complimentary [sic] machines, and for a long time to come one is unlikely to be able to operate safely without the other”.⁶⁴

Liddell Hart also considered bombing to be the primary military role for aircraft, as illustrated by his comment on the “...ease with which air attack can paralyse armies through strikes on assembly routes and positions, communications, supply and munitions centres”.⁶⁵ Unlike Fuller, he made no mention of the possibilities offered by air transportation, either in the inter-war period despite the widespread use of air transport in the empire, or even after a British airborne force had become a reality.⁶⁶ Fuller and Liddell Hart remained focused on mechanisation, and consequently regarded aircraft as long-range artillery, with a subsidiary reconnaissance and air defence role.⁶⁷ This was despite the fact that both acknowledged the difficulty of striking small targets with aerial bombing,⁶⁸ and despite clear evidence of the applicability of air transportation as an adjunct to mobility.

The essay preceding Liddell Hart's in **The Next Ten Years...**, for example, contained a wealth of detail on recent advances in air technology with particular reference to the carriage of more passengers and freight by air for longer distances, the military utility of which are obvious.⁶⁹

Their neglect may have been a side effect of the Army's separation from airmen and aircraft by the RAF's independence, but the fact remains that Fuller's and Liddell Hart's failure to draw the appropriate conclusions denied the airborne idea influential theoretical recognition in Britain. This in turn may have contributed to the British failure to officially investigate the airborne idea in the inter-war period.

However, they were not the only British military thinkers, and the airborne idea was discussed in British military journals. An early and significant article appeared in the **Royal United Services Institute Journal (RUSI)** in 1935, by Major J. T. Godfrey, RE.⁷⁰ Godfrey's work merits detailed examination because it presents the coherent synthesis between air and mechanised operations missed by Fuller and Liddell Hart. Entitled "Winged Armies", Godfrey's paper focused on the relevance of aerial developments in a British context. In particular, he highlighted the need for official Army-RAF co-operation, observing that "...in cases where air transport has been provided [by the RAF] for the Army, its use was dictated by purely temporary considerations; it has not, so far, been a matter of deliberate policy."⁷¹

Godfrey envisaged the formation of what he termed an "air brigade", equipped with vehicle mounted machine guns and anti-tank guns. A basic tactical unit of six vehicles, consisting of one radio-equipped command vehicle, four machine gun carriers and an anti-tank gun carrier, was suggested. The brigade in total would field three hundred and sixty such vehicles, delivered by one hundred and twenty aircraft carrying three vehicles each. Enemy communications were identified as the most promising target for the brigade, in conjunction with "mobile land forces of armoured fighting vehicles". Godfrey also identified the need for "a high degree of air superiority", and the need for a suitable landing ground near the target but as remote as possible from sizeable enemy forces. He defined the purpose of the brigade as being to

"...plant , by means of air transport, a "cell" on a nodal point of the enemy's communications, perhaps 50 to 100 miles behind the main theatre of operations, and to maintain it there until, like a tumour on the enemy's arteries, it has paralysed the part of the body fed by them. The cell must be a definite fighting organism, capable of endurance for several days, and in the actual case will have wide powers of movement."⁷²

Godfrey went on to stress the importance of timing and surprise, the need for accurate intelligence on the selected landing area, and the necessity of transmitting that information to the troops using maps, sand models and aerial photographs. The task of the brigade's first wave was to secure the landing area or cell, after which succeeding waves would "leapfrog" outward to expand the perimeter to approximately six miles, and including the objective. Godfrey based his projections on a hypothetical ratio of trips-per-aircraft-per-day, although the fact that no specific aircraft or loads were cited limited its utility. Nonetheless, he correctly pointed out that "...every minute by which the unloading time could be reduced would speed up the formation of return batches, and render their protection easier".⁷³

Godfrey's paper also examined a number of operational details. These included the composition of the different waves, logistic requirements for operations of differing lengths, guarding enemy prisoners and civilians within the cell perimeter, the advantages of establishing two or more cells simultaneously, and how a cell could be re-oriented if faced by enemy opposition at the original insertion point. Godfrey's view of the value of the airborne operations echoed that of Benjamin Franklin a century and a half earlier:

"With the great flexibility of aircraft, organised raids on factories a hundred miles behind a land army front would effect a surprise, or compel an enemy detachment of large size to protect all of them. The procedure would be much the same as in the cell attack on communications, but shorter and sharper...one success should exert a moral effect out of all proportion to the cost of the enterprise. Thereafter, the mere threat of such attacks might compel the enemy government to provide protective troops; and these must be supplied to the detriment of the main army - a fact which in itself constitutes no small success - or from lower-grade local reserves, with whom the air-borne picked troops should be able to deal easily. Such a menace would act as a sword of Damocles over thousands of square miles of enemy territory, able to deal irreparable blows with startling suddenness".⁷⁴

The article concluded with a brief examination of the strategic benefits of his air brigade, and its utility as an adjunct for imperial policing. In the latter case it was shrewdly observed that a "...small reinforcement arriving early is of many times greater value than a larger but later reinforcement".⁷⁵ Godfrey also recommended the establishment of a chain of landing grounds across the empire, which would allow a strategic reserve located in the Sinai to be deployed rapidly to wherever it was needed. This would provide

"...one of the most mobile forces in the world, capable of throwing reinforcements across continents with a rapidity which would revolutionize all existing calculations...The virtual effect would be that of multiplying many-fold the strength of the [Imperial] garrisons by increasing their range and speed

of action. Small insurrections could be nipped in the bud before they attained serious proportions, and a punitive force, either in vehicles or not at will, could come directly to grips with the offender.”⁷⁶

Godfrey's airborne vision was remarkably prescient, although it was by no means flawless. The lack of precise aircraft and vehicle details rendered his detailed hypothesising worthless, and he also appears to have been unaware of the degree to which the air transportation and supply was already an accepted and expanding norm in the empire at that time.⁷⁷ His concept also bears more than a passing resemblance to contemporary Soviet Deep Battle theorising by Tukhachevsky and Tatarchenko.⁷⁸ Indeed, Godfrey admitted that his idea was “...a military parallel to that which has inspired one of the most successful political methods of Communism...the political “cell” established in the heart of the enemy camp”.⁷⁹ Godfrey served as a military attaché in Warsaw from 1935 to 1938,⁸⁰ and he is likely to have learned of Soviet developments from prior contacts with the Polish military; this was the same period when the Poles began to develop an interest in airborne matters themselves.⁸¹ In addition, it is curious that Godfrey made no reference to the use of parachutes, despite the fact that the Soviets were making widespread use of them at the time he was writing. A mass Soviet drop was carried out before Western observers at the Kiev manoeuvres only the month after Godfrey's article was published, for example. This raises the suspicion that he based his theorising on intelligence on earlier Soviet developments.⁸² Godfrey's article was still remarkable, because it shows that there was British discussion of the airborne idea in the inter-war period, and well-informed discussion at that. He formulated a valid operational role for his air brigade as an adjunct to mechanised warfare, and highlighted the strategic advantage an airborne force offered to the British military in an imperial context.

Godfrey was not alone in his hypothesising. In May 1936 **The Army, Navy and Air Force Gazette** published an article entitled “Three Infantries, Not One Infantry”, that suggested amalgamating all British Rifle and Light Infantry (LI) units to form a distinct sub-division of the infantry arm.⁸³ The new force would be air transported, was intended to become a RAF equivalent to the Royal Marines, and thus offer the most rapid method of deploying troops to the European mainland. Delivery was to be via by parachute, glider or autogiros, with the latter also being used for casualty evacuation. Development of special lightweight weapons and equipment was also suggested, including a “9 lb. machine pistol”. Creation of a parallel force for use in the empire was also recommended. The Punjab Frontier Force (PFF) was nominated for this role, which the writer considered would enable the PFF to recover its “one time briskness” on the Northwest Frontier.⁸⁴

Major-General H. Rowan Robinson followed this in December 1936, when **The United Services Review** published his “Air Infantry: How Can This Development Assist Great Britain”.⁸⁵ Rowan Robinson was a well-published military commentator,⁸⁶ and his article was a response to the highly publicised Soviet airborne manoeuvres in the Moscow Military District in September that year, and newspaper reports on French airborne infantry experiments. He concluded that it was a “...reasonable proposition to land considerable bodies of men and equipment from aeroplanes”, and that an airborne force would allow the fullest military exploitation of the advantages offered by aircraft. Rowan Robinson proposed four missions for such a force. These were categorised under the headings “decisive destruction”, “raid”, “battle action” and “reinforcement”. Raids were intended to be “simpler affairs” than decisive destruction, which would entail the seizure and retention of an area for a considerable period. Battle action encompassed missions “...in tandem with ground operations”, such as the seizure of “defiles in the enemy rear, or pivots for mechanised attacks”. Rowan Robinson acknowledged that his work was based in part upon Godfrey, but also suggested that the latter’s air brigade structure be augmented with light howitzer, mortar and anti-aircraft elements. He also echoed LVSB’s stress on the need for special lightweight weapons and equipment, and for airborne troops to be “hardy and frugal” in order to cope with likely supply limitations on operations. Rowan Robinson closed his article with the prophetic comment that:

“We cannot disassociate ourselves from this idea, for it is a novel and promising application of the unchanging strategy which has for [a] foundation the attack and defence of communications. The sooner, therefore, we undertake the necessary experiments the better”.

Before drawing conclusions on the military theorists, it should also be noted that discussion of the airborne idea was not restricted to military journals. In 1934, an anonymous short story entitled “The Counter Raiders” appeared in **Blackwood Tales from the Outposts**.⁸⁷ This described in detail a fictional parachute operation on the Northwest Frontier. The native parachute troops envisaged were specially clothed and equipped for their role, and the description of the static-line jump suggests that the author had at least witnessed such an event personally. The story anticipated LVSB's recommendations for converting the PFF into an airborne unit by around two years, and may well have been written by him. The description of a shoulder-fired grenade launcher is of particular interest, because of its remarkable similarity to the M79 Grenade Launcher used by US forces from the early 1960s.

With hindsight, all these articles are remarkably prescient. They encapsulate almost all the factors that guided and shaped the development of a British airborne force after June 1940.⁸⁸ The latter included the design and production of a plethora of specialised equipment ranging from special steel helmets and other clothing to lightweight tanks.⁸⁹ British airborne infantry were equipped in large numbers with the Sten sub-machine gun, to provide concentrated firepower in the assault;⁹⁰ the Sten weighed just under 9 lb. loaded.⁹¹ It was also prescient to identify the advantages air transport offered for the rapid deployment of troops to the Continent. On the other hand, it is doubtful that LVSB imagined the post-Dunkirk circumstances that rendered it necessary for Churchill to order the creation of a parachute raiding force to carry the war back to the victorious Germans.⁹²

All that, however, lay a few short years in the future. The point here is that Godfrey, LVSB and Rowan Robinson were discussing the merits of the airborne idea in a British public military forum, and not just within the imperial paradigm. This suggests that the British air transport lead did not lapse because the Army and RAF were unaware of the possibilities offered by developing their existing capabilities. The fact remains, however, that no such development was carried out or even investigated. The next section will therefore attempt to explain this seemingly puzzling omission.

VI. An Inappropriate Method for the Circumstances: The Case Against the Establishment of a Dedicated British Airborne Force in the Inter-War Period

Superficially, a dedicated British airborne force appeared to hold a number of advantages for imperial policing as practised in the empire between the wars. In fact it did not, for it is difficult to see how a dedicated force could have improved on the pre-existing *ad hoc* practice of air landing conventional troops. As we have seen, this practice expanded from lifting company-sized units of troops a hundred miles or so in 1923, to the extended shuttling of over five thousand troops and their supplies over an eighteen-month period in India in 1936-38.⁹³ This alone suggests that the existing system functioned perfectly well within its operational parameters. The technique required no specialist training, and only a slight re-configuring of personal equipment, which in practical terms made the experience little different from travelling by road or rail. In addition, the high level of operational co-operation between the Army and RAF, allied to the relatively modest scale of their air landing operations, was sufficient to offset the lack of a formal establishment and command structure.

Consequently, the only advantage a dedicated airborne force might conceivably have offered over the existing *ad hoc* system was a direct assault capability. This, however,

would have been of limited utility to imperial policing as practised by the British between the wars. Quelling urban unrest was one of the staple imperial policing tasks - the first airlift of British troops in Iraq in May 1924 was in response to unrest in Kirkuk, and similar unrest prompted the first airlift of troops over the open sea from Palestine to Cyprus in October 1931.⁹⁴ Urban terrain is highly unsuitable for landing by aircraft or parachute, and a dedicated airborne force therefore offered no advantage over airlifted conventional troops in such circumstances.

It can also be argued that an assault capability would have been of limited utility in the wilder hinterland of the Empire too. Admittedly, the Soviets enjoyed some success with air landing parties against *Basmachi* tribesmen in the Turkestan Military District in the late 1920s, but this was largely due to the element of surprise, which would reduce in direct proportion to the frequency of use. Their equivalents in the British empire were equally unsophisticated, but it is logical to assume that they would have quickly latched onto the crucial importance and characteristics of landing grounds suitable for such operations. The deep shelters adopted by tribal communities as a counter to the RAF's Air Control bombing supports this. Tribesmen would doubtless have used their superior local knowledge to avoid or set ambushes on suitable landing areas, and the effect of accurate small arms fire upon slow and vulnerable transport aircraft can be imagined. The mountainous nature of much of the empire also suggests that it may not have been possible to land troops in locations to best exploit the shock effect of their arrival.

It is therefore highly likely that a dedicated airborne force would have spent a good deal of time waiting for the enemy to place themselves obligingly in proximity to a suitable landing ground. Manpower was always at a premium in the empire, and a specialised airborne unit would have to have been employed on conventional imperial policing tasks in the interim. Not only would this have been a misuse of expensive training, it would also have defeated the object of forming such a force. Using parachutes could have circumvented the reliance upon aircraft landing grounds, but this would also have created as many, if not more, problems than it resolved.

Establishing a parachute force would have obliged an additional joint training and equipment effort, for teaching troops to parachute requires much more expertise than merely training them to disembark from a landed aircraft in a tactical manner. More importantly, the utility of parachuting was also questionable in the British imperial context. The fact that there were relatively few aircraft of sufficient size to carry parachutists would have restricted the size of any force so equipped. It should be remembered that

parachutists too require a suitable landing zone, and cannot therefore be dropped anywhere. Parachute troops could have been used to secure aircraft landing sites, but would have offered little improvement on the limitations of air landing already examined. An alternative would have been to deploy them as a quick reaction spearhead for ground forces, but this too would have been a tricky proposition. The fate of the “Edwards Patrol” in the Radfan Mountains of the Yemen in 1964, with lightweight radios, jet aircraft and helicopters all to hand, provides a graphic illustration of the likely fate of a small force isolated in territory dominated by tribesmen.⁹⁵ The prospects for a small parachute-inserted party in the wilder reaches of the empire during the inter-war period would arguably have been at least as bleak.

A dedicated airborne force thus offered little, if any, benefit over the *ad hoc* system already in place in the empire in the inter-war period. That is not to say that parachute operations were totally inappropriate in a colonial context. The French made extensive use of the technique in Indo-China in the 1940s and 50s,⁹⁶ and British Special Forces used the technique on a smaller scale during the Malayan Emergency. This, however, was because the capability and equipment was readily available as result of the Second World War, rather than because the method was particularly suitable. It can therefore be argued that there was no justification for the establishment of a dedicated British airborne force within the specific time-frame of the inter-war period, when the existing level of air transportation and supply of troops remained quite sufficient for the needs of that mission. The key to understanding why the British did not establish a dedicated airborne force thus lies in understanding the parameters of imperial policing as practised by the British in that period, rather than looking back with hindsight from the post-1945 period.

This perspective might also cast new light on contemporary British reaction to Soviet airborne developments. The leader of the British military delegation to the 1936 Minsk manoeuvres, future Field-Marshal Lord Wavell, and later Lieutenant-General Sir Giffard Martel both produced accounts of the operations. Wavell noted that “...the parachutists we saw in action after the landings were in remarkably good trim and mostly moving at the double”,⁹⁷ whilst Martel, who was chauffeured around the drop zone, commented that

“In spite...of spending quite a long time seeing them land or talking to them after they had done so, I failed to find a single [parachuting] casualty. Some of them had fallen on trees and others on the roofs of houses, but they seemed to have been able to negotiate their difficulties and the worst we saw were a few cuts and abrasions. They were certainly none the worse for their descent and most of them were doubling to collect by units.”⁹⁸

However, both observers also commented on the dispersion of the paratroopers, and on the amount of time it took for them to rally. Martel noted that "They [the paratroopers] were scattered over a considerable area and it was at least an hour before the force was properly assembled".⁹⁹ Wavell went further, considering the "...tactical value [of the technique] may be doubtful", and that it "...apparently took some time to collect the force after the landing; about one and a half hours after the first descent began, a part of the force was still being collected".¹⁰⁰

The latter observations are typically quoted piecemeal, and are generally interpreted as typifying rigid, reactionary and obstructionist Army thinking in the face of innovation. However, the general tone of the comments in full, and the background and future careers of the officers involved suggest otherwise. Wavell, for example, was one of the most enthusiastic senior supporters of the British airborne force in 1940 and 1941, and Martel's staunch advocacy of armoured and mechanised warfare shows he was far from reactionary or hidebound.

It can thus be argued that in fact, Martel's and Wavell's comments represent a fair and balanced appraisal of what they witnessed based upon professional experience. Admittedly, the most intensive portion of that experience was gained from service on the Western Front during the First World War, and it would be surprising if this did not colour their views somewhat. However, given the fact that imperial policing had been the major focus of the Army's activity before and after the First World War, it is also logical to assume that the realities of the Army's major duty played some part in their appraisal. It is therefore probably not coincidental that both men highlighted the very weakness that rendered parachute insertion unsuitable for use in a British colonial context.

It should also be noted that the bulk of the Soviet paratroopers seen by Wavell and Martel dropped without weapons.¹⁰¹ This was a very common practice, at least in early airborne operations, obliged by a combination of cramped contemporary transport aircraft and limitations of parachute harness design. Troops therefore dropped from the aircraft and recovered their weapons from externally carried containers jettisoned at the same time after landing. This technique was used by German paratroopers in Scandinavia and the Low Countries in 1940, and initially by the British until the development of special kit-bags and weapons valises, which could be attached to the individual for the jump, in 1942-43.¹⁰² Whilst the practise may thus have been unavoidable, it was extremely hazardous from a tactical perspective; many German paratroops were killed or wounded attempting to reach their containers on Crete, for example.¹⁰³ Given their military experience, it is hardly

surprising that both Martel and Wavell also picked up on this glaring tactical handicap in 1936.

The airborne idea was therefore not suitable for imperial policing as practised by the British in the inter-war period. However, the focus of the Army shifted from the empire to nearer home at the end of the 1930s, with the growing awareness of the threat posed by Hitler's resurgent Germany. It will thus be necessary to examine briefly whether or not this re-orientation toward conventional warfare in the contemporary sense offered more fertile ground for the airborne idea in a British context.

This is again an attractive proposition, not least because by the late 1930s there had been some theoretical British examination of the airborne idea to provide a foundation. The matter was again not so straightforward. First, there were relatively few transport aircraft in the UK., the majority being stationed in the empire where there was most demand for them. Second, irrespective of their location, all such aircraft remained firmly under RAF control, and relations between the Army and RAF at home lacked the flexibility engendered by the realities of the imperial environment, where mutual necessity outweighed petty inter-service rivalries. Thus there were few aircraft available in Britain to utilise for the creation of an airborne force for deployment in a conventional European war, and the RAF had no need and little interest in pursuing transportation or co-operation in the home environment in any case.

Third, there is again the matter of suitability. Most of what British airborne theorising appeared was primarily concerned with the application of the idea in a conventional war context. This was also largely based on the Soviet model, which was intended as an adjunct to the Soviet theory of mechanised deep battle. British operational need at that time was rather more restrained, being focused primarily upon defensive operations in France and Belgium. This allowed little scope for offensive airborne operations, even had the RAF possessed and been forthcoming with the necessary aircraft. The British theorists thus failed fully to appreciate the operational and fiscal realities of the British situation before 1940. Consequently, it can be argued there was even less justification for the creation of a home-based British airborne force than there had been in the empire.

It is thus clear why, despite the seeming suitability of the airborne idea, the British did not extend their lead in the air transportation and supply into the establishment of a dedicated airborne force in the inter-war period. Government parsimony played a major role, exacerbated by the pernicious effects of inter-service rivalry. This resulted in an

overarching shortage of funding, that heightened the rivalry between the Army and RAF, and in the process largely precluded airborne experimentation, joint or otherwise. The situation was further complicated yet further by the RAF's independent status, which allowed it to pursue its own aims and doctrines whilst maintaining sole control over British military aviation. In addition, the Army was overstretched, preoccupied with mechanisation, and experiencing difficulty attracting sufficient infantry recruits to cover its existing commitments.

If this were not sufficient explanation as to why the British neglected to establish a dedicated airborne force before June 1940, there is also compelling evidence to argue that there was simply no real need for capability offered by such a force. It was of dubious utility in an imperial policing context, and offered no real advantage over the *ad hoc* but perfectly functional Army-RAF co-operation in the empire. British military observers kept abreast of foreign activities, whilst home-grown theorists provided a foundation for future development. This remained the case until the German offensive in the West in May 1940, which simultaneously delivered a stinging object lesson in the application of the airborne idea, and transformed both the British situation and the British attitude to the creation of an airborne force out of all recognition.

Notes

¹ see for example John Connell Wavell: **Soldier and Scholar**, pp. 182-183; and Lt.-Gen. Sir Giffard Martel, **An Outspoken Soldier**, pp. 139-140; for Churchill's paper, see PRO CAB 120/10, War Cabinet Paper dated 16/06/1940

² see for example PRO AIR 2/3897, "1938 - Formation of Parachute Troops in Germany: Report from British Air Attaché, Berlin", dated 30/08/1938; and PRO WO 190/811, "1939, May 19: Note on Parachute Units in German Defence Forces", report from M. I. 3b, dated 19/05/1939

³ "Wings of the German Air Force", **The United Services Review**, (13 October, 1938), p. 9

⁴ quoted in Bond *op cit.*, p. 24

⁵ quoted from "Statement Relating to Defence, 1935", **Cmd. 4827**: cited in Kennedy, *op cit.*, p. 18

⁶ Bond, pp. 24-25, 33

⁷ for details of the ISTDC, see David Massam, **British Maritime Strategy and Amphibious Capability, 1900-1940**, pp. 140-154

⁸ see Harold R. Winton, **To Change An Army**, especially Chapter 4

⁹ figures quoted from Kennedy, p. 75

¹⁰ for details of the Army's expanded commitments and the problems thus generated, see Bond, pp. 15-22

¹¹ see for example Hilary St. George Saunders, **The Red Beret**, pp. 52-53

¹² Lt.-Col. Graham Seton Hutchinson, DSO, MC "The Army of Tomorrow: How to Make it a Corps D'elite", *The Army Quarterly*, Volume 30, pp. 71-85

¹³ Capt. R. L. Telfer, "The Army of Today", *The Army Quarterly*, Volume 31, pp. 124-130

¹⁴ Lt.-Col. Seton Hutchinson, "Recruiting: The Real Problem and its Solution"; Maj.-Gen. J. F. C. Fuller, "Our Recruiting Problem, and a Solution"; "A Decurion", "The Recruiting Problems of the British Army"; and I. A. M. MacLennan, "Recruiting Stagnation: A Younger View", in *The Army Quarterly*, Volume 33, pp. 79-90, 222-233, 285-292, 293-302

¹⁵ quoted from Seton Hutchinson, (The Army of Tomorrow), *The Army Quarterly*, Volume 30, pp. 76, 80

¹⁶ "The Army of Today", *The Times*, 25, 26 and 27 November 1935

¹⁷ see for example Kennedy, whose work examines all aspects of the Army in 1935, including the role of cavalry, promotion, the Army's legal system, the reserve system and training; and Major-General H. Rowan-Robinson, *Security? A Study of Our Military Position*

¹⁸ Maj.-Gen. J. F. C. Fuller, *Lectures on F. S. R. III*, p. 16

¹⁹ Liddell Hart, *The Future of Infantry*

²⁰ see for example Major-General H. Rowan-Robinson *The Infantry Experiment*; anon. "The New Warrior", *The Army Quarterly*, January 1934; "LVSB", "Three Infantries, Not One Infantry", *The Army, Navy and Air Force Gazette*, Volume LXXVII (14 May, 1936), pp. 395-396; Lt.-Col. W. Wilberforce DSO, MC "The Infantry of the Future", and Capt. J. R. J. MacNamara MP, "Army Methods of Training: Approach of the Modern Reorganised Infantry Platoon Toward the Enemy", in *The United Services Review*, 22 April, 1937, p. 5 and 26 August, 1937, p. 5 respectively

²¹ David Fraser, *Alanbrooke*, pp. 80-81

²² for a detailed account of this process, see Winton; see also Bond, pp. 127-190; and Charles Messenger, *The Art of Blitzkrieg*, pp. 37-48, 67-76, 105-114

²³ quoted from Cooper, *op cit.*, p. 154

²⁴ RAF personnel figures broke down as 27,906 Officers and 263,842 Other Ranks, as quoted in PRO CAB 4/8, Committee for Imperial Defence paper 349-B, nd, c.1918; cited in Omissi, *op cit.*, p. 8; statistics and squadron totals are from Cooper, pp. 154-155

²⁵ Cooper, p. 154

²⁶ quoted from Malcolm Smith, *British Air Strategy Between the Wars*, p. 28

²⁷ see Omissi, pp. 14-17; Smith, p. 28; and Towle, *op cit.*, p. 12

²⁸ for details, see Cox, *op cit.*, pp. 162-165

²⁹ the RAF's first two monoplane twin-engined bombers, the Handley Page Harrow (AM Spec. 29/35) and Bristol Bombay (Air Ministry Spec. C. 26/31), which entered service in 1937 and 1939 respectively, were officially classified as bomber transports; see Thetford, *op cit.*, pp. 136-137, 310-311

³⁰ Omissi, p. 21

³¹ for a balanced and in-depth study of Air Control, see Omissi; and Towle, pp. 19-34; for a participant account, see Slessor, pp. 45-75. For a predictably pro view, see also D. J. Dean, "Air Power in Small Wars: The British Air Control Experience", *Air University Review*, Volume 34, No. 5 (1983); for a more balanced view see C. Townshend "Civilisation and Frightfulness: Air Control in the Middle East Between the Wars", in Chris Wrigley (Ed), *Warfare, Diplomacy and Politics* (London: Hamish Hamilton, 1986), pp. 142-162

³² for details of the establishment of RAF armoured car units, see Omissi, pp. 60-63; and W. Michael Ryan, "The Influence of the Imperial Frontier on British Doctrines of Mechanised Warfare", *Albion*, Volume 15, No. 2 (1983), p. 136

-
- ³³ quoted in Omissi, p. 60
- ³⁴ quoted from Smith, p. 45
- ³⁵ quoted from Uri Bialer, **The Shadow of the Bomber**, p. 2
- ³⁶ for a contemporary view, see for example Captain H. S. Broad, "If it Happened To-day! War From the Air", **The Army, Navy and Air Force Gazette**, Volume LXXVII (30 July 1936), p. 620
- ³⁷ for example Bialer, pp. 155, 20-24; Smith, p. 47; and John Terraine, **The Right of the Line**, p. 8-13
- ³⁸ see Smith, especially pp. 44-75, 140-197; and Terraine (**Right of the Line**), pp. 12, 45-53
- ³⁹ quoted from Smith, pp. 45-46
- ⁴⁰ see for example Terraine (**Right of the Line**), pp. 98-107
- ⁴¹ quoted from Bernard Fergusson, in his preface to John Kennedy, **The Business of War**, p. xv
- ⁴² see Ryan, p. 136; and Omissi, pp. 60-63
- ⁴³ see Omissi, pp. 61-62
- ⁴⁴ quoted from Bond, p. 106; see also Omissi, pp. 70-75
- ⁴⁵ see Winton, p. 80
- ⁴⁶ see Sir Giffard Martel, **An Outspoken Soldier**, pp. 68-69; and J. P. Harris, **Men Ideas and Tanks**, p. 280
- ⁴⁷ see for example Norman Dixon, **On The Psychology of Military Incompetence**, especially pp. 36-79; Geoffrey Regan, **Someone Had Blundered**, pp. 192-208; and id, **The Guinness Book of Military Blunders**, pp. 31-39, 76-78; all three works are widely available in public libraries, an indication of their popularity, and by extension the popularity of the negative portrayal of the British Army. Regan has been especially prolific in this regard, having published around a dozen books around the issue of military incompetence, although it must be acknowledged that the British Army is not his sole target.
- ⁴⁸ see for example Leon Wolff, **In Flanders Fields**; Alan Clark, **The Donkeys**; and more recently John Laffin, **British Butchers and Bunglers of World War One**
- ⁴⁹ see Trevor Wilson and Robin Prior, "Summing Up the Somme", **History Today**, Vol. 41, (November 1991), pp. 37-43; and Peter H. Liddle, **The 1916 Battle of the Somme: A Reappraisal** (London: Leo Cooper, 1992). For a more up to date example, see the outspoken attack upon Alan Clark by Lord Anglesey, "Ouch! What a lovely war as historian blasts Clark", **The Sunday Times**, December 8, 1996, p. 3.
- ⁵⁰ quoted from Brian Bond, **Victorian Military Campaigns**, p. 309; cited in T. R. Moreman, "The British and Indian Armies and the North-West Frontier, 1846-1914", **Journal of Imperial and Commonwealth Studies**, Volume 20 No. 1 (1992), pp. 35-64.
- ⁵¹ according to Ryan, the British post-1918 lead in mechanised warfare was directly attributable to the legacy of Colonial warfare; see Ryan, p. 123
- ⁵² according to one source, a company sized unit of Rangers was operating in Nova Scotia from 1744, until the expansion of the unit by the original leader's son into Gorham's Rangers in 1750. The same source also claims this unit was the only American Ranger unit to offer regular commissions; for these and other details see Alan M. and Frieda W. Landau, **Airborne Rangers**, 1992), pp. 8-12
- ⁵³ David Gates, **The British Light Infantry Arm**, pp. 12-13; and Arthur Bryant, **Jackets of Green**, pp. 21, 31-32
- ⁵⁴ Moreman, pp. 37-43
- ⁵⁵ Brian Bond, "Doctrine and Training in the British Cavalry, 1870-1914", in Michael Howard (Ed), **The Theory and Practice of War** (London: Cassell, 1965), pp. 96-125, especially pp. 104-110; for

developments post-1902, see Edward M. Spiers, "The British Cavalry, 1902-1914" *Journal of the Society for Army Historical Research*, Volume 57 (1979), pp. 71-79

⁵⁶ for details of PFF artillery, see Moreman, p. 41; and Michael Barthorp, "The Mountain Gun", *Military Illustrated Past and Present* (MI) No. 78 (November 1994).

⁵⁷ David Fletcher, "Steam Sappers: Steam Engines in the Boer War", MI No. 47 (July 1994), pp. 28-30

⁵⁸ see for example Kennett, op cit., p. 7

⁵⁹ see for example John Terraine, *White Heat*, pp. 238-247; and J. P. Harris, *Men, Ideas and Tanks*, especially pp. 47-195

⁶⁰ see Winton, pp. 65-86.

⁶¹ Major E. G. Hume, "Mechanisation from a Cavalry Point of View", *Journal of the Royal United Service Institution*, November 1927, pp. 808-811; cited in Winton, p. 84

⁶² quoted from correspondence with Dr Brian Holden Reid, King's College London, 14 November 1997. I am indebted to Dr Reid for his kind response to my enquiry and the alternative sources he suggested

⁶³ quoted from Fuller (Lectures on FSR III), pp. 159-160

⁶⁴ *ibid.*, pp. 24-25

⁶⁵ quoted from Liddell Hart, "[The Next Ten Years]...In Warfare", in *The Spectator Booklet II: The Next Ten Years* (London: Methuen, 1934), p. 36. This work contains a series of essays by leading thinkers in specific fields, including aviation, medicine, science and military affairs.

⁶⁶ see for example *Paris: Or, the Future of War*, and *The British Way in Warfare*. The dates are significant here. The former work makes no mention of aircraft as a means of transportation despite the fact that the technique was already becoming increasingly common in the Empire, and the latter also makes no reference at all to the possibilities for troop deployment from the air by whatever method, despite the fact that a British airborne force had been established for two years

⁶⁷ see for example Fuller, (Lectures on FSR III), pp. 33-34, and "Air Power: The Keystone in our Defence Problem", *The Army, Navy and Air Force Gazette*, Vol. LXXVII (10 September 1936), p. 739

⁶⁸ Fuller (Lectures on FSR III), p. 23; and Liddell Hart (*The Next Ten Years*), p. 40

⁶⁹ The Master of Sempill, "[The Next Ten Years]...In Aviation", pp. 1 - 8

⁷⁰ Major J. T. Godfrey, RE, p.s.c., "Winged Armies", *The RUSI Journal* (August 1935), pp. 486-499

⁷¹ *ibid.*, p. 487

⁷² *ibid.*, p.490

⁷³ *ibid.*, p. 491

⁷⁴ *ibid.*, p. 497

⁷⁵ *ibid.*, p. 497

⁷⁶ *ibid.*, p. 498

⁷⁷ for details see Chapter One above

⁷⁸ see for example Glantz, op cit., pp. 4-31

⁷⁹ quoted from Godfrey, p. 490

- ⁸⁰ Colonel J. T. Godfrey was commissioned into the Royal Engineers on 27 October 1915 and held a number of staff appointments in the inter-war period, including Staff Captain at the War Office in 1927, Assistant Military Attaché to Washington in 1929, and Military Attaché to Warsaw, 1935-1938. I am indebted to Dr John Rhodes, Curator of the Royal Engineers Museum, for supplying this information.
- ⁸¹ see Chapter One above
- ⁸² for the early Soviet recourse to parachutes, see Glantz, pp. 5-7; for details of the Kiev drop, see *ibid.*, pp. 14-20
- ⁸³ LVSB (possibly L. V. Stewart Blacker, an acknowledged and regular contributor), "Three Infantries, Not One Infantry", *The Army, Navy and Air Force Gazette*, Volume LXXVII (14 May, 1936), pp. 395-396
- ⁸⁴ the PFF was an all-arms force raised in India in the Nineteenth century, which was configured, trained and equipped for mountain warfare; for details see Moreman, especially pp. 40-42
- ⁸⁵ Major-General H. Rowan Robinson, "Air Infantry: How Can This Development Assist Great Britain?", *United Services Review*, Volume LXXVII (17 December 1936), pp. 5-6
- ⁸⁶ Rowan Robinson had at least nineteen military related works published, and was a regular contributor to contemporary military debate in the inter-war period; see for example *Some Aspects of Mechanisation, The Infantry Experiment, Security? A Study of Our Military Position and Imperial Defence: A Problem in Four Dimensions*
- ⁸⁷ "The Counter Raiders", in *Blackwood Tales from the Outposts III*, pp. 277-313. I am indebted to Mr Alex Marshall, University of Glasgow, for bringing the story to my attention
- ⁸⁸ see for example PRO AIR 2/7338, doc. 1"A", letter from Churchill to Ismay, dated 22/06/1940
- ⁸⁹ for details of airborne clothing, see Brian L. Davis, *British Army Uniforms*, various entries; for tank details see George Forty, *World War Two Tanks*, pp. 12-13
- ⁹⁰ Otway, *op cit.*, p. 46
- ⁹¹ for details see Ian Hogg and Rob Adam, *Jane's Guns Recognition Guide*, pp. 277-282
- ⁹² PRO CAB 120/414, minute from Churchill to Chiefs of Staff, dated 03/06/1940, and letter from Churchill to Ismay, dated 05/06/1940; the latter document is filed in the *Churchill Papers*, 20/13; cited in Gilbert, *op cit.* (*Churchill War Papers Volume II*), p. 251
- ⁹³ Grant and Cole, *op cit.*, pp. 57-65, 80
- ⁹⁴ for details see *ibid.*, pp. 59, 65
- ⁹⁵ for a detailed account, see Tony Geraghty, *Who Dares Wins*, pp. 69-79
- ⁹⁶ for French details see for example George Bernard Fall, *Hell in a Very Small Place*; for a detailed account of SAS "tree jumping" in Malaya, see Geraghty, pp. 29-38
- ⁹⁷ Otway, p. 3
- ⁹⁸ quoted from Martel (*An Outspoken Soldier*), p. 139
- ⁹⁹ *ibid.*, p. 139
- ¹⁰⁰ quoted from Otway, p. 3
- ¹⁰¹ Martel, p. 139; and Otway, p. 3
- ¹⁰² for German details see for example Lucas, *op cit.*, (*Storming Eagles*), pp. 21-22; for details of British developments see Otway, pp. 98, 410-411
- ¹⁰³ see for example MacDonal, *op cit.*, p. 175

CHAPTER THREE

A Salutary Shock: The Impact of German Airborne Operations in the Low Countries and Defeat in France, May - June 1940

The outbreak of war in September 1939 did not immediately change the British attitude to the creation of a dedicated airborne force, not least because the defensive nature of the British commitment in France rendered it superfluous. However, the German offensive in the West that opened on 10 May 1940 precipitated a near catastrophic series of events for the Allies. In the space of a mere twenty-four days, Holland and Belgium were overrun, the Anglo-French Armies were split, and the bulk of the British Expeditionary Force (BEF) were evacuated in an *ad hoc* operation from Calais and Dunkirk. The remainder of the BEF, accompanied by a variety of Allied military and civilian personnel, were removed from ports along the north and western French seaboard by 20 June 1940.¹

British military circumstances were thus transformed out of all recognition, and British attitudes to the creation of an airborne force along with them. This chapter will therefore begin by briefly surveying the German airborne operations in the Low Countries that spearheaded their offensive into the West, because it was these operations which inspired Churchill to order the formation of a British force with similar capabilities. It will then examine the impact of the subsequent Allied defeat on the condition and attitudes of the Army and RAF, to provide the necessary backdrop to the final section. This will be an examination of Churchill's initial order to establish a parachute force, and the motivation behind it.

I. Catalyst and Example: German Airborne Operations in the Low Countries, May 1940

The German assault upon the Low Countries was spearheaded by a series of special operations at Hitler's personal insistence. These operations were carried out by specially trained *Heer* troops from conventional units and members of the *Brandenburger* special forces unit, but the largest were carried out by the new and largely untried German airborne force. This comprised Student's 7th *Flieger* Division and the *Heer*'s operationally subordinate 22nd *Luftlande* Division, an Army formation configured and trained for air landing operations.² The German plan had undergone a series of modifications since Hitler unveiled his requirement to Student on 27 October 1939, but the basic objective remained constant. This was vertically to outflank Belgian and Dutch troops, and to facilitate the western advance of German ground forces by seizing water crossings on their line of

march. The latter obliged a *coup-de-main* assault on the Belgian fortress of Eben Emael, whose guns controlled vital bridges over the Albert Canal.

Student's command had gained some operational experience prior to its assault on the Low Countries. Parachute units were not committed in Poland, being held back for a series of aborted airborne operations, but an infantry regiment from 22nd *Luftlande* Division was deployed by air for conventional operations in the closing stages of the campaign. 7th *Flieger* Division's paratroops had their baptism of fire in April 1940, in a series of small *coup-de-main* operations to seize airfields at Aalborg and the three kilometre bridge linking Copenhagen with the Gedser ferry terminal in Denmark, and the Oslo-Fornebu and Stavanger-Sola airfields in Norway. All three operations were successful, although not without some confusion in Norway, particularly at Oslo-Fornebu. A later company-sized operation, intended to prevent a link up between Norwegian and British troops at Dombas, failed when bad weather prevented aerial re-supply or reinforcement, and the survivors were taken prisoner after fighting alone for ten days.³ Student also authorised the formation of an experimental glider unit in November 1939, to test the glider's utility as transport for assault engineers attacking fixed defences. Initially codenamed "Test Section Friedrichshafen", the unit became formally established as "Assault Battalion Koch", and was considered to be an elite within an elite, a status which it was to confirm at Eben Emael.⁴

For the thrust into the Low Countries, Student's force was divided into three parts. These were Assault Detachment Koch, Group North, and Group South, each of which was tasked with specific objectives. Assault Detachment Koch, sub-divided into four Groups entitled "Granite", "Concrete", "Iron" and "Steel", was to neutralise the fortress of Eben Emael and seize three nearby bridges across the Albert Canal.⁵ Group North, consisting of the bulk of 22nd *Luftlande* Division with a parachute spearhead, was to secure airfields near The Hague at Valkenburg, Ockenburg and Ypenburg, before seizing the Dutch government, Royal family and military leadership. These landings were thus intended to strike at the heart of the so-called "Fortress Holland", thereby denying the RAF use of airfields to strike at Germany, and vertically outflanking the Dutch "Grebbe" and "New Water" defence lines.⁶ Last but not least there was Group South, consisting of the bulk of 7th *Flieger's* parachute units and attached elements of 22nd *Luftlande*. Its mission was to seize Waalhaven airfield, south-east of Rotterdam, and road and rail bridges at Moerdijk, Dordrecht and in Rotterdam itself, thereby providing an avenue of attack into Western Belgium and the Channel ports.⁷ The bridge at Rotterdam was to be seized by a *coup-de-*

main, utilising twelve *Luftwaffe* Heinkel He 59 seaplanes to deliver troops from 22nd *Luftlande* directly onto their objective.⁸

These operations were tactically and geographically disparate, and reflect the broad-brush nature of German airborne doctrine. As such, they were a blend of the original *Luftwaffe* concept of a small airborne sabotage force, the *Heer's* view of parachute forces as a spearhead for air landing operations, and Student's more radical concept of an independent, all-arms airborne force to operate in support of major ground operations.⁹ Assault Detachment Koch's mission was thus essentially an expanded *coup-de-main* sabotage mission carried out in support of ground operations, an amalgam of the original *Luftwaffe* and *Heer* concepts. Group North's mission was a blend of the *Heer's* concept modified with Student's idea of airborne troops as a shock force as advocated in his "drops of oil" technique, while that of Group South was a similar mix to Group North's, with an additional *coup-de-main* element. In the event, Assault Detachment Koch and Group South were largely successful, whilst Group North's operation proved to be a costly failure.

The almost total success of Assault Detachment Koch was due to a combination of surprise (the operation marked the first combat use of gliders), reinforced by meticulous and painstaking training and rehearsal. The unit had practised full-scale assaults with live ammunition and explosives on former Czechoslovak fixed defences. Experience gained from these exercises allowed the fabrication of special armour-piercing shaped charges to penetrate Eben Emael's armoured gun cupolas.¹⁰ The value and quality of this preparation is shown by the fact that the initial phase of the assault succeeded without its designated commander, *Leutnant* Witzig. Witzig force-landed in Germany after his tug aircraft jettisoned the tow to avoid a collision in the pre-dawn darkness; he arrived later, in broad daylight and before the fortress was fully subdued, having personally secured a replacement tug aircraft for his glider.¹¹ Groups Concrete and Steel succeeded in seizing their allotted bridges over the Albert Canal, whilst Group Iron's target was demolished by its defenders during their glider approach, leaving that Group to establish a bridgehead instead. All three units held on to their objectives until relieved by ground forces on the afternoon of 10 May 1940, whilst Group Granite was eventually reinforced by a unit of *Heer* engineers at around 0700 hours on 11 May 1940. The Eben Emael fortress and its garrison of 1,200 men surrendered at 13.15 the same day.¹²

Surprise was also crucial to the success of Group South, reinforced by accurate delivery of the assault forces. Student, although nominally in charge of Group North and South, jumped in with the second wave of Group South. This act, whilst undoubtedly courageous,

can also be regarded as rather foolhardy, and highlights a particular dilemma faced by airborne commanders, in addition to the routine but nonetheless demanding command and control problems that can hamstring any military operation. The presence of a senior commander in the initial assault risks his loss should the initial assault go awry, yet delay can fatally compromise a commander's ability to influence events with equally catastrophic results. In Student's case, leading from the front had drastic consequences, for he was severely wounded in the head by trigger-happy members of the SS *Leibstandarte Adolf Hitler* in the closing stages of the battle for Rotterdam. This also highlights the very real dangers associated with placing airborne troops in front of advancing ground forces.¹³

Group South succeeded in seizing the airfield at Waalhaven with an imaginative parallel assault. Paratroops were dropped along the edges of the airfield, and once their activities had drawn the attention of the defenders, transport aircraft landed troops directly onto the runway. This operation was carried out under fire and several aircraft crash-landed, but within a matter of minutes an entire infantry battalion was on the ground and the airfield was secured shortly thereafter. The seaplane *coup-de-main* against the bridges in Rotterdam and the parachute assaults on the bridges at Moerdijk and Dordrecht were also largely successful. However, all the units involved and those from Waalhaven attempting to link up with the defenders of the Rotterdam bridges became embroiled in street-fighting, which continued until they were all relieved by the 9th *Panzer* Division on 13 May 1940.¹⁴ Thus Assault Detachment Koch and Group South both achieved their primary aim, that of enabling German ground forces "...to burst through a defence system which could not have been overcome so quickly by traditional means".¹⁵

Group North did not achieve a comparable degree of success due to a combination of factors. The Dutch defenders were alert to the possibility of airborne attack, and had reinforced airfield defences and obstructed runways. Flawed operating procedures and plain bad luck exacerbated this. The parachute drop at Ockenburg and Ypenburg airfields was scattered, and the paratroopers were unable to recover their weapons containers before the first transport aircraft arrived. The latter then tried to land on the unsecured runways, with predictable results.¹⁶ Anti-aircraft defences took a heavy toll, and many aircraft were obliged to land instead on roads, fields and beaches. As a result, few of their passengers were able to reach their initial objectives. The parachute spearhead at Valkenburg fared better, but the ground there was too soft to support a fully laden Junkers 52, and the field was rapidly blocked by bogged aircraft. The last wave of transports was diverted to Waalhaven, in Group South's area. As a result of all this, the attack on The Hague was

abandoned, and the remnants of Group North moved to link up with Group South, arriving at Rotterdam on the night of 12-13 May 1940.¹⁷

Group North's operation was thus a costly failure, as a German source acknowledges:

“Of the 430 Ju-52s engaged in the [whole] operation two-thirds either never returned from Holland or were so badly damaged as to be write offs. The special purpose [group] *KGzbV2*, during the landing attempts in The Hague area, lost ninety per cent of its aircraft. The Dutch airfields [and roads, fields and beaches] were littered with broken and burnt-out wrecks.”¹⁸

The toll was not restricted to equipment, for 22nd *Luftlande* Division lost forty per cent of its officers and twenty-eight per cent of its other ranks killed,¹⁹ along with some 1,600 prisoners, many of whom were shipped to Britain for incarceration. Given the failure of Group North, the majority of these prisoners were presumably from 22nd *Luftlande*, a suggestion reinforced by contemporary photographic evidence. On 20 May 1940 *The Times* published a picture captioned as showing German airborne troops captured in Holland, all of whom were wearing *Heer* uniform. The accompanying text, however, specifically referred to the capture of parachute troops with their special equipment.²⁰ At least some paratroopers were also captured. A subsequent photograph in *The Times* on showed a group of six *Fallschirmjäger* wearing several items of special airborne equipment, allegedly developed from a camera belonging to a parachute POW captured in Holland.²¹

The impact of the German airborne operations in the Low Countries was considerable, but their scope and operational variations made it difficult for contemporary observers to form an accurate picture of what had occurred. The results ranged from understandable misunderstanding to wild exaggeration of German airborne capabilities.²² For example, Otway's official account of British Airborne Forces claimed that Witzig's engineers parachuted onto Eben Emael and were reinforced by glider.²³ The uncertainty was heightened by deliberate German misinformation. The tug aircraft that delivered Assault Group Koch dropped dummy paratroops with attached pyrotechnic devices to simulate gunfire. These sowed confusion behind the Belgian lines,²⁴ and presumably account for Otway's error.

Nonetheless, the British were able to gain enough information on German operational practices and equipment to guide their own initial airborne effort. British paratroops were initially equipped with step-in cotton duck jump smocks and high-leg side-laced boots modelled closely on German equipment,²⁵ and the pyrotechnic dummy idea was also noted

for future reference. Similar devices were employed during Allied airborne operations in Sicily in 1943, and in Normandy the following year.²⁶ In addition, the German attack on Eben Emael and a subsequent *coup-de-main* operation to seize the Corinth Canal crossings in Greece in 1941 inspired a comparable British operation. This was the seizure of the Orne River and Canal bridges on the eve of the D-Day landings in June 1944, to seal the eastern flank of the invasion beaches.²⁷ The German model also presumably accounted for the formation of brigade-size "Aerodrome Capture Groups", which featured in early British airborne planning.²⁸

It would also appear that the British were quicker than the Germans to draw the appropriate conclusions from the Low Countries example. German paratroops continued to drop separately from their weapons, although this was in part due to the limitations of German parachutes and transport aircraft.²⁹ In contrast, by the time of their large-scale operations, British parachute troops were equipped with a variety of special weapon sleeves and valises that allowed them to jump with all issued personal weapons, including Sten guns, Lee Enfield rifles and Bren light machine-guns.³⁰ It also appears that the *Luftwaffe* learned little from their severe aircraft losses, given that they tried an assault air landing against unsubdued defences again at Maleme airfield on Crete the following year, and with similar results. Their British counterparts, on the other hand, turned to gliders to deploy its "airlanding" troops in units of up to brigade size. The 52nd Lowland Division was at one point configured as an "airportable" unit,³¹ although it was never operationally deployed in that capacity.

This particular instance was arguably a case of the British learning a lesson too well. The 52nd Lowland was slated for delivery to Deelen airfield north of Arnhem in the latter stages of Operation Market-Garden, the ill-fated attempt by the British 1st Airborne Division to seize crossings over the Dutch River Rhine in September 1944.³² The failure of 1st Airborne to achieve its primary objective rendered that part of the operation superfluous. However, it could be argued that had 1st Airborne Division been employed to set up an airhead at Deelen instead, in conjunction with glider *coup-de-main* operations to seize the river crossings, Operation Market-Garden might have turned out very differently, the presence of two depleted SS *Panzer* formations notwithstanding.

These developments lay far in the future from the dark perspective of May and June 1940. In the circumstances, both the Army and RAF would have been fully justified in concentrating upon more pressing matters, not least the perceived threat of imminent invasion. It was thus left to Churchill to take the initiative, and his offensive proposals

following the defeat and evacuation of the BEF included the creation of a parachute force. His sponsorship of the idea, however vague, therefore obliged the Army and RAF to investigate the matter. Before analysing Churchill's proposals, it will first be necessary briefly to examine the impact of the defeat in France upon those two services, in order to set both the proposals and Army and RAF reactions in their proper context.

II: The Impact of Defeat One: The Army in France and Belgium, 10 May-4 June 1940

The events of May and June 1940 undoubtedly impacted heaviest upon the Army. Mere fractions of the deployed equipment and supplies were salvaged; 322 from 2,794 artillery pieces, 4,739 from 68,618 vehicles, 32,303 from 109,000 tons of ammunition, 33,060 from 449,000 tons of other stores and supplies, and 1,071 from 166,000 tons of fuel. Arguably more importantly, the BEF left 68,111 of its personnel in France, killed, missing or as POWs.³³ The scale of the BEF's defeat would suggest that the shortcomings in the Army's tactical training identified in the 1930s had gone unaddressed. In September 1939 an officer in the Directorate of Military Training predicted that the current conflict would replicate the First World War for the infantry, unless training began to "...appeal to his [the soldier's] intelligence", with emphasis on fieldcraft to allow the infantryman to become a "...stalker, athlete [and] marksman".³⁴ This view was remarkably similar in content and language to that expressed by Lieutenant-Colonel Graham Seton-Hutchinson in *The Army Quarterly* five years previously, and by Liddell Hart before that.³⁵

All this would appear to justify then Major-General Montgomery's typically forthright opinion that "...in September 1939 the British Army was totally unfit to fight a first-class war on the Continent of Europe",³⁶ and John Terraine's assertion that

"A generation of senior commanders which had passed through the First World War seemed only able to remember the great static battles of 1915-17; they forgot how fast things had often moved in 1918 and they ignored what had happened in Poland in 1939."³⁷

But Montgomery was somewhat over-egging the pudding and, whilst Terraine's comments are justified to a degree, it is important to distinguish reality from hindsight. The Army undoubtedly suffered a major and humiliating defeat, and perhaps had more than its share of faults. However, there is a good deal of evidence to support the argument that the BEF was by no means as rigid and hidebound as it is often portrayed, and that its defeat was in part due to circumstances beyond the Army's control. It will be necessary examine this evidence for two reasons. First, because it is unfair and inaccurate to lay all the blame for

the defeat at the Army's door. Second, and more importantly, because such an examination confirms that the Army was in fact flexible enough to recognise and adopt new ideas, a vital factor in the subsequent establishment of a British airborne force.

First, whatever the Army's flaws and the views of military commentators in the 1930s, there appears to have been little wrong with the Army's basic raw material in 1940. It may be exaggerating to claim that the BEF's infantrymen "...constituted the best disciplined, best led, man for man the best infantry in the world...[who maintained]...an incredible sense of *personal* superiority" (original italics),³⁸ but they did nonetheless give a very creditable account of themselves. The SS *Leibstandarte Adolf Hitler*, for example, credited the British troops they encountered with providing "...the most severe opposition the SS had encountered...[which]...was thought...to be maintained by first-class, elite troops".³⁹ In fact, the troops referred to were Territorial rather than Regular soldiers, which emphasises the basic qualitative point. This is not to deny that there were serious flaws slightly higher up the tree. The BEF despatched to France in September 1939 bore little relation to its 1914 predecessor, and not just because Regular units ultimately formed a minority within its ranks, augmented by Territorial volunteers. Unlike 1914, the Regular Army's "...quality and leadership [were] often flabby and defective...[and whilst] Regular units possessed a basic discipline and standard of administration...Territorial units had...too little time to acquire, and too little experience to develop [similar capabilities of their own]".⁴⁰ Operational conditions exacerbated these problems:

"...as the French insisted on wireless silence, there could be no Command Post Exercises to practise communications and control, of the kind vital to give cohesion to an Army...much of the Army was not equipped for modern war at all...the Regular divisions themselves suffered a shortage of vital specialist weapons, of ammunition, of spare parts, of communications; but above all of tanks...there was totally inadequate air support...[thus in real terms] the BEF was an infantry force, albeit with a great deal of motor transport".⁴¹

The crux of all these problems lay in years of mismanagement and fiscal neglect, and it was unreasonable to expect the BEF to right them in a matter of months, and under war conditions.

The BEF's problems were magnified by uncertainty generated from several quarters. The BEF represented only around a tenth of the combined Anglo-French strength,⁴² and it was logical that the British force should thus play a subordinate role. However, contact with French forces aroused British concern over their mettle and reliability, even in a Francophile like then Lieutenant-General Brooke, who noted his misgivings as early as

November 1939.⁴³ This was exacerbated further by the defensive scheme to which the BEF was committed. Codenamed “Plan D”, this required the BEF to advance to meet any German attack into Belgium and set up a defensive line along the River Dyle to the East of Brussels, but only after formal invitation from the Belgian government. The Belgians were understandably wary of provoking the Germans, but their failure to prepare proper positions for the BEF to occupy, or to liaise effectively with the French and British commands placed the BEF at a severe disadvantage.⁴⁴ In addition, the BEF's London masters made their own contribution to the climate of uncertainty. BEF units were allocated for Churchill's abortive scheme to aid Finland against the Soviet Union, the BEF's 5th Division was removed to create a “War Office Reserve” in April 1940, and still more units and equipment were diverted for the ill-fated Norway expedition.⁴⁵

It is also difficult to condemn the BEF's leadership for its failure to predict the form of the German attack. The Chiefs' of Staff assumption that any German offensive would be a re-run of the 1914 version of the Schlieffen Plan was misplaced,⁴⁶ but their French superiors shared it. The French High Command initially acknowledged the possibility of an assault through the Ardennes, but then reverted to “...the belief that the Ardennes were impassable, an assumption...invested with all the prestige of Foch and Petain”.⁴⁷ This also reinforced French faith in the impregnability of the Verdun-inspired Maginot Line.⁴⁸ These assumptions were further reinforced by intelligence obtained from a force-landed German aircraft on 10 January 1940.⁴⁹

Consequently, the BEF's planning and dispositions were framed by factors outside its control, and that its efforts were based upon the best information currently available. Any error was therefore due as much to a lack of relevant intelligence as faulty military appreciation. As an authority on intelligence succinctly puts it:

“The chief reasons for the oversight [i.e. misjudging the location of the main German offensive in May 1940] were two-fold. Certain preconceptions, based on other considerations than intelligence, kept attention elsewhere. Intelligence was unable to unearth sufficient information to undermine these preconceptions.”⁵⁰

It is also important to acknowledge that the Army made an effort to rectify identified failings. For example, the War Office issued a new Military Training Pamphlet (MTP) in March 1940.⁵¹ In combination with a re-organisation of the infantry platoon structure this “...had the highly significant effect of turning the corporal in charge of a section [the basic tactical platoon sub-unit] from a mere subordinate leader into a commander in his own right, with two tactical components to co-ordinate”.⁵² This impulse eventually led to the

establishment of a central School of Infantry in October 1942, building upon the success of Divisional Battle Schools modelled on similar First World War organisations. The process was hampered by a reactionary tendency in some quarters within the Army to shoot the messenger rather than heed his message.⁵³ Although it would be a mistake to overstate the significance of the March 1940 initiative, for the infantry continued to draw criticism, particularly following the D-Day invasion in June 1944,⁵⁴ the fact remains that the Army made at least some effort to put its tactical training in order *before* the Dunkirk debacle.

Similarly, a number of officers in the BEF were subsequently to distinguish themselves, many of whom had also participated in the fast moving tactical successes of 1918.⁵⁵ Indeed, it could be argued that the German tactics employed with such devastating effect in 1940 were merely a more refined and technologically advanced variation on the British 1918 theme. The degree to which German armoured doctrine was influenced by British pioneers has been challenged by recent research,⁵⁶ but the armoured counter-attack at Arras on 21 May 1940 clearly shows that the British Army nonetheless possessed something of the necessary expertise. The fact that the attack was led, literally, by Martel (also a First World War veteran) from an open car *a la* Rommel or Guderian reinforces the point.⁵⁷

All this does not alter the fact that the Army suffered a comprehensive defeat and was ignominiously ejected from the Continent in the process. It does, however, show that the BEF and by extension the Army as a whole was not as rigid and hidebound as some portrayals would suggest. The most conclusive evidence of this is the enthusiasm with which the Army reacted to Churchill's directive to establish a parachute force.

III: The Impact of Defeat Two: The RAF in France and Belgium 10 May-4 June 1940, and the Effect Upon Army-RAF Relations

The RAF's Advanced Air Striking Force (AASF) and BEF Air Component suffered losses proportionately as heavy as those of the Army, if not more so.⁵⁸ RAF casualties during the Battle of France totalled 931 aircraft and 1,526 killed, missing or captured. The majority of these casualties were aircrew.⁵⁹ Squadrons equipped with the Fairey Battle bomber were particularly hard hit, rapidly suffering a fifty-six per cent casualty rate attacking bridges over the Meuse at Sedan, which obliged a switch to night operations.⁶⁰

Like the Army, the RAF suffered from conflicting priorities. Until July 1939 the Air Ministry's Home Defence planning was based upon the premise that the *Luftwaffe* would be operating from bases inside Germany,⁶¹ but the rapid German advance into France and

the Low Countries vastly expanded its offensive capabilities. This in turn obliged the RAF to adjust its priorities, for it simply did not possess the resources to support the BEF and defend British airspace. Procurement of fighters for Home Defence had been a pre-war bone of contention,⁶² and the minimum considered necessary by both the Air Ministry and Fighter Command was eroded by assigning fighters to the AASF and BEF Air Component.⁶³ Demand for fighter support reached unsustainable levels by 15 May 1940, leaving the War Cabinet with the unenviable task of choosing between Home defence and the pleas of the Army and their Allies. The former need prevailed, and no more fighters were despatched to France.⁶⁴ Fighter cover for the BEF, such as it was, came henceforth from bases in the south of England. This in turn fed a growing, widespread and inaccurate perception within the Army that it had been let down by the RAF.

The problem was that the RAF incurred its losses largely beyond sight of the BEF, which understandably contrasted a perceived lack of RAF activity with the depredations of the *Luftwaffe*. The result was a further souring of Army-RAF relations, which were in any case frequently far from cordial.⁶⁵ Alanbrooke claimed in his diary that he “...practically never saw a [RAF] fighter during...[his]...time in France”,⁶⁶ and made numerous references to unopposed German air attacks upon the BEF, an implicit criticism in itself.⁶⁷ The BEF's lower echelons were less circumspect. One RAF participant claimed that an Army officer informed a pilot seeking evacuation at Dunkirk that “...all boats were for the Army and not for the RAF”,⁶⁸ whilst another recalled receiving “a really good verbal pasting” from newly evacuated soldiers at London's Victoria station.⁶⁹

These Army reactions may have been understandable, but they were unfair. RAF fighter aircraft, frequently outnumbered, were indeed present over France, but their activities increasingly occurred beyond the sight of ground observers. As one participant pilot pointed out:

“What Dunkirk did for air fighting was that it moved the fighting...from around 7,000 to 10,000 feet, straight to over 20,000 feet in about four days...this is one of the reasons I'm sure the Army often said, 'where are these fighter pilots?' They were there all right but they [the Army] couldn't see them.”⁷⁰

Army perceptions of the matter may have been exacerbated by poor aircraft recognition. A forced-landed RAF pilot was present at an Army brigade headquarters near Dunkirk during an air-raid alarm. To the surprise of his hosts including the brigadier, the pilot was able categorically to identify the aircraft concerned as belonging to the RAF:

“This...astonished the Army who said that they did not know that all British fighters had the under surface of their wings on one side painted white and on the other painted black. They said they had frequently seen aircraft with these markings and did not realise they were RAF...at the time of Dunkirk there was ...much distress in the Army because they were not being protected by the RAF...personally I think that at least part of the explanation must be that there had been an extraordinary failure by British Intelligence in that at a unit as important as a brigade headquarters no one knew the standard RAF markings.”⁷¹

The reality of the RAF's contribution was thus somewhat different from Army perceptions, bruised Army sensibilities notwithstanding. Inter-Service prejudice, possibly reinforced by an understandable if less than creditable Army desire to deflect responsibility for its defeat, proved stronger and more attractive than the facts.

That said, it must also be acknowledged that RAF attitudes did little to alleviate matters. The Air Ministry made no secret of the fact that it viewed the provision of air support for ground forces to be a “gross misuse of air forces”.⁷² The costly RAF actions in France were thus considered an unwelcome distraction from what the Air Ministry saw as its primary task - delivering a “knock-out blow” to Germany's war making capacity.⁷³ Its single-minded adherence to this view is well illustrated by the War Cabinet crisis meeting held on 15 May 1940.⁷⁴ The rapidly worsening situation in France prompted an appeal from the Army for the RAF to emulate the *Luftwaffe* by striking with all possible strength at the communication centres that were feeding the German advance.⁷⁵ However, the Air Staff considered unleashing a strategic air offensive against the Ruhr to be a more appropriate course of action.⁷⁶ The fact that this was supported by Dowding, who had fought hard against the bombing lobby to establish an effective Fighter Command, underlines the extent to which bombing dogma permeated the RAF.⁷⁷ Unsurprisingly, the Army was unimpressed. As the Chief of Imperial General Staff (CIGS) trenchantly observed at the time, if “...the battle [of France] is lost, the bombing of the Ruhr means nothing at all to the fate of the Empire”.⁷⁸

The RAF's attitude might have been marginally more acceptable had it possessed the means to carry out such a strategic bombing offensive. Unfortunately, despite RAF enthusiasm and grandiose claims, it did not. In September 1940, Bomber Command consisted of forty operational squadrons. Admittedly, attrition in France had largely removed single-engine machines from Bomber Command's inventory, but the remainder was still unsatisfactory for strategic bombing purposes.⁷⁹ They were classified as “medium” or “heavy medium” bombers,⁸⁰ and included the Bristol Blenheim, Handley Page Hampden, Armstrong Whitworth Whitley and Vickers Wellington. Collectively

these types lacked speed, range, defensive armament and payload for strategic bombing, albeit in varying degrees. The larger four-engine Short Stirling heavy bomber was in the pipeline, but did not enter squadron service until August 1940, and was not operational until the following February. Even then, the machine had an “unimpressive bomb-load” and poor service ceiling.⁸¹

This dearth of equipment was paralleled by a lack of suitable operating procedures and tactics. Pre-war faith in the ability of bomber formations to defend themselves against fighter attack proved ludicrously optimistic, as shown by the fifty per cent casualty rate suffered in daylight raids during 1939.⁸² Shifting by necessity to night bombing threw up as many problems as it solved. Not least of these was the matter of locating the target, the difficulties of which were clearly illustrated; by the disappointing results of Bomber Command’s first night strike against Hörnum in the Friesian Islands on 19 March 1940. This provided “the first object lesson on the ineffectiveness of night bombing, with the existing lack of navigational facilities.”⁸³ There was clearly much to be done before strategic bombing could live up to the potential claimed by the RAF’s bombing lobby.

This then was the military background against which Churchill ordered the establishment of a British airborne force. The underlying condition of the Army was not as bad as its defeat in France suggested, largely due to its innate flexibility. It did, however, have its work cut out in June 1940 preparing for seemingly imminent invasion and attempting to repair the damage incurred at Dunkirk. The position of the RAF was similar, insofar as it had suffered significant losses in France, but was also preparing to repel German invasion. Relations between the two services were at an all time low. The Army felt that it had been badly let down by the RAF in France. For its part, the RAF was impervious to Army hostility, and was happily focusing on launching a long planned strategic bombing offensive against Germany. These were not auspicious conditions in which to launch a new inter-service venture, and the two services’ individual reactions to Churchill’s directives differed significantly.

IV. Fiddling While Rome Burned: Churchill's Directives of June 1940

Churchill raised the subject of raising raiding and parachute forces in a minute to the Military Secretary to the Cabinet, General Sir Hastings Ismay, on 3 June 1940.⁸⁴ The Prime Minister expressed concern over the possibility of German landings from both the air and sea, warned against the dangers of adopting the “...completely defensive habit of

mind which has ruined the French”, and postulated on the possibilities of carrying the offensive back to the Germans:

“...if it is so easy for the Germans to invade us...why should it be thought impossible for us to do anything of the same kind to them...It is of the highest consequence to keep the largest number of German forces all along the coasts of the countries they have conquered, and we should immediately set to work to organise raiding forces...composed of the self-contained, thoroughly equipped units of say 1,000 up to not less than 10,000 when combined.”⁸⁵

Churchill expanded on his offensive theme in another minute to Ismay on 5 June 1940. This called for the appropriate authorities to investigate ways of expediting his suggestions, and recommended that yet-to-arrive Australian troops be divided into:

“...detachments of 250, equipped with grenades, trench mortars, tommy guns, armoured vehicles and the like, capable of acting against an attack in this country...[and]...landing on the friendly coasts now held by the enemy. Enterprises must be prepared, with specially trained troops of the hunter class, who can develop a reign of terror down these coasts, first of all on the 'butcher and bolt' policy, but later on, or perhaps as soon as we are organised, we should surprise Calais or Boulogne, kill or capture the Hun garrison and hold the place until all the preparations to reduce it by siege or heavy storm have been made, and then away...I look to the Joint Chiefs of the Staff to propose me measures for a vigorous, enterprising and ceaseless offensive against the whole German-occupied coastline”.⁸⁶

This was followed by a list of five specific measures. The first on the list was a call for proposals for organising “striking Companies” [sic]; number four was for the “deployment of parachute troops on a scale equal to 5,000”.⁸⁷

The immediate purpose of the new raiding force was thus relatively straightforward. It was to inculcate and preserve the British offensive spirit, by prosecuting a “vigorous, enterprising and ceaseless offensive against the whole German-occupied coastline [of Europe]”.⁸⁸ The longer term purpose of the force, if any, and the precise manner in which it was to carry out its mission were less clear. In part, this was because Churchill’s *modus operandi* was to frame concepts and leave the details to others, and then monitor progress and interfere as necessary. In this instance, the new raiders were formally established as Commando units, operating under an independent Combined Operations Headquarters set up especially for the purpose. The Commandos then evolved into elite light infantry, capable of raiding and carrying out operations in support of more conventional units. Commando units were instrumental in securing the left flank of the Normandy beach-head on D-Day, for example, and provided half the initial assault wave in the Rhine crossing of March 1945.⁸⁹

At the time of their inception, however, this line of development was by no means clear. It may have been Churchill's intention, a suggestion supported by his repeated references to the inclusion of Australians, New Zealanders and Canadians in the new raiding force. Troops from these Commonwealth nations were regularly used as shock troops during the First World War, and possibly Churchill continued to view them in this light, in the same way as he apparently viewed German airborne troops as a more up-to-date version of First World War stormtroops.⁹⁰

Churchill's motive for issuing his requirement for a raiding force is similarly obscure, for whilst the impulse was laudable, the timing was anything but. In part, this was due to his character, for Churchill's mental resilience and capacity for work displayed incredible stamina for a man of his years, along with a high degree of single-mindedness and an impressive grasp of detail. Unfortunately, the latter quality also drove him to expend energy on relative trivia, which was frequently included in directives, and which thus tended to obscure the underlying point. As one of his contemporaries commented:

"Winston's ceaseless industry is impressive. He is always having ideas which he puts down on paper in the form of questions and despatches to Ismay or the CIGS for examination. Sometimes they relate to matters of major importance, such as the measure to be taken against invasion, or the provision of more aeroplanes, and sometimes they relate to quite trivial questions. This is the sort of thing: "General Ismay. Inquire into the number of German guns now trophies in this country, and whether any can be reconditioned for blocking exits from beaches"...Another today asked whether wax could be supplied to troops to put in their ears to deaden the noise of warfare."⁹¹

Churchill's directives to establish raiding and parachute forces could therefore have formed part of a mental long-term plan, or been the result of a late-night whim, for it was not unknown for him to work from his bed.⁹² It is also possible that psychology played a part, for aggressive scheming would appear to have provided Churchill with a mental safety valve of sorts, and directives on such matters frequently mirrored downturns in the British military situation. The minutes of 3 and 5 June 1940, for example, coincided with the official cessation of the Dunkirk evacuation. A later directive specifically regarding the creation of parachute troops, dated 22 June 1940,⁹³ followed the evacuation of all remaining Allied forces from the Continent.

Churchill's sponsorship of a parachute force was unsurprising, and not merely due to the spectacular German demonstration in the Low Countries. He had a long-standing interest in the air deployment of troops, and had theorised on the subject as far back as 1917, and again in 1936.⁹⁴ The driver for his 1940 renewal of interest is apparent in his minute of 3

June 1940: "...if it is so easy for the Germans to invade us in spite of sea-power some may feel inclined to ask the question - why should it be thought impossible for us to anything of the same kind to them?"⁹⁵ This is clearly a reference to German airborne capability, with the implication that it should be imitated. This is confirmed by the inclusion of the requirement for parachute troops in the minute of 5 June 1940.

This minute was Churchill's first specific reference to the creation of a British airborne force, although airborne matters clearly remained in his thoughts thereafter. On 16 June 1940 he re-issued his 1936 paper "Invasion by Air", as part of a demand for the Home Defence authorities to appraise him of preparations to repulse such an event.⁹⁶ He returned to the subject again on 22 June 1940, in a further letter to Ismay:

"We ought to have a corps of at least 5,000 parachute troops, including a proportion of Canadians, Australians and New Zealanders, together with trustworthy Norwegians and Frenchmen...I hear something is being done already to form such a corps but only, I believe, on a very small scale. Advantage must be taken of the summer to train these forces, who can none the less play their part meanwhile as shock troops in home defence. Pray let me have a note from the War Office on the subject."⁹⁷

There can thus be no doubt that Churchill wanted a parachute force, but what he wanted it for is less certain. The characteristic vagueness of his directive makes it difficult to identify any specific intent for such a parachute force. It may have been intended for small-scale raiding, although Churchill's reaction to the initial low level of activity suggests differently, or as shock troops, or as a large-scale strategic spearhead on the German Low Countries model. Churchill's vagueness may also have been deliberate, to allow the individuals tasked with carrying out his proposals latitude. Whether or not, it could also cause confusion, both at the time and long after the event.

The date of the establishment of a British airborne force provides a clear and relevant illustration of this. Otway's official **Airborne Forces**, The Ministry of Information's **By Air to Battle**, and Saunders' semi-official **The Red Beret** all cite 22 June 1940, because of Churchill's memo of that date.⁹⁸ However, Churchill referred specifically to the raising of a parachute force seventeen days earlier, on 5 June 1940, and this date is considered to mark the beginning in some later works on the subject.⁹⁹ The point is open to individual interpretation, but it clearly illustrates the problems inherent in Churchill's method of issuing his requirements. Providing the spirit of a given directive was adhered to, this presented no great problem, but ambiguity was a two-edged sword because it allowed

scope for obstruction through selective interpretation, a practice which became a recurring theme in the evolution of a British airborne force.

Churchill's airborne directives may have been vague, but it does not necessarily follow that there was no specific purpose behind them. There is a tendency to link the establishment of a British airborne force with that of the Commandos, not least because they both came from the same directive. This is an understandable assumption, which is supported by the fact that the Army's first parachute unit was established within the Commando raiding umbrella. It is further reinforced by the fact that the first British airborne ventures, against the Tragino Aqueduct in Southern Italy in February 1941 and the German radar station at Bruneval in February 1942, were small-scale raiding operations.¹⁰⁰ However, it is thus equally possible that the assumed association between the establishment of a British airborne force and a sea-borne raiding force is exactly that, and their simultaneous appearance in the directive of 5 June 1940 could be entirely coincidental. Both measures were undoubtedly offensive in nature, and the initial placing of the parachute force within the Commando framework could have been for administrative convenience rather than any intent to use it exclusively for raiding. Similarly, the fact that the first two British parachute operations were raids is as indicative of development levels, inter-service politics and operational opportunity as of any inclusion in any grand raiding design.

It is therefore perfectly possible that Churchill was thinking big from the outset, literally and metaphorically, and the evidence for this view can be seen in his directives. The initial raiding directive of 3 June 1940 suggested the formation of an unspecified number of raiding units totalling 10,000 men "when combined". How these raiders were to be delivered was not specified, although the wording suggests by sea.¹⁰¹ This is supported by the content of his directive of 5 June 1940, and it is reasonable to assume that Churchill was referring to this 10,000 strong force of raiders when he called for "proposals for organizing the striking Companies". The same directive ordered the "deployment of parachute troops on a scale equal to 5,000". Had Churchill intended these to be included in the 10,000 raiding force, it would have been logical to include this as part of the first measure on his list of recommendations, or at least to place it at number two. The fact that it was separated by orders as dissimilar as investigating means for delivering tanks over beaches and setting up espionage and intelligence networks along enemy held coasts suggests that the two ideas should be regarded distinct entities. It should also be noted that 5,000 men is a relatively large force which, although it did not fit into any existing British military organisation, was half as large as the projected ceiling for the new raiding force.¹⁰²

Churchill's later directives also support the thesis that he was thinking big. His directive of 22 June 1940 re-iterated the demand for 5,000 parachute troops, and demanded details from the War Office of how this requirement was to be met.¹⁰³ He also stuck to his original figure when informed that the parachute force only numbered 500 in August 1940, scrawling "I said 5000" in the margin of the offending document.¹⁰⁴ The biggest clue to Churchill's initial airborne intentions appeared in a letter to Ismay at the end of May 1941, following the furore generated by the lack of progress evident on a visit to the Parachute Training Centre at RAF Ringway on 26 April 1941. In this he lamented the fact that British airborne progress constantly lagged behind that of the Germans, and pointed out that "we ought to have 5,000 parachutists and an Air-borne division on the German model, with any improvements which might suggest themselves from experience".¹⁰⁵ This would indicate that by this date at least, if not before, Churchill did not intend a British airborne force to operate in a raiding role, except perhaps as a temporary expedient. Rather, it would appear that he intended them to be used in the perceived German manner, in support of conventional operations.

Of course, much of this is conjecture, and it is getting somewhat ahead of the story. What is certain is that Churchill proposed a host of offensive measures to carry the war back to the Germans following the evacuation of Dunkirk, and that two of those measures were the establishment of a raiding force and a parachute force, possibly for the same purpose. The matter then passed into the hands of the organisations charged with turning Churchill's theorising into an operational reality, and it will now be necessary to examine the reactions of the Air Ministry and the War Office to Churchill's directives.

Notes

¹ the German offensive in the West commenced on 10 May 1940, the evacuation of Dunkirk was terminated by 4 June 1940, and the last elements of the BEF and other dependants were evacuated by 20 June 1940; see Major L. F. Ellis *The War in France and Flanders*, pp. 244-246. 305

² *Militargeschichtliches Forschungsamt* (Research Institute for Military History), Freiburg, Germany (Eds.), *Germany and the Second World War, Volume II*, p. 254; for details of *Brandenburger* operations, see James Lucas, *Kommando*, pp. 56-67

³ Cajus Bekker, *The Luftwaffe War Diaries*, pp. 58-59, 97-113

⁴ Lucas (*Storming Eagles*), op cit., pp. 33-34; MacDonald, p. 17; and Bekker, pp. 124--125

⁵ for details of the Groups and their objectives, see Bekker, pp. 119-120

⁶ for details of the scheme in its entirety, see *Militargeschichtliches* Volume II, pp. 275-276; and Hickey, op cit., p. 48

⁷ Lucas (*Storming Eagles*), p. 225; and Otway, op cit., p. 9

-
- ⁸ Bekker, p. 132; Otway, p. 9; and Hickey, p. 50
- ⁹ for details of these differing views, see Chapter One above
- ¹⁰ Lucas (Storming Eagles), p. 33; and Bekker, p. 118
- ¹¹ MacDonald, op cit., pp. 31-32; and Bekker, pp. 120, 126-127
- ¹² for a detailed account see Bekker, pp. 121-128; Mrazek, op cit.; Tugwell, op cit., pp. 51-60; Hickey, pp. 51-55; and Lucas (Storming Eagles), pp. 36-46
- ¹³ James Lucas and Matthew Cooper, *Hitler's Elite*, p. 67.
- ¹⁴ Bekker, pp. 130-139
- ¹⁵ *Militargeschichtliches* Vol. II, p.281.
- ¹⁶ apart from side arms, German paratroopers jumped separately from their weapons, which were dropped in special containers; see Quarrie (German Airborne Troops) op cit., pp. 25-26; Lucas (Storming Eagles), pp. 367-368; and MacDonald, p.175.
- ¹⁷ Bekker, pp. 138-139; MacDonald, p.34; and Hickey, pp. 48-50.
- ¹⁸ Bekker, pp. 149-150
- ¹⁹ MacDonald, p.37.
- ²⁰ *The Times*, Monday 20 May 1940, p. 8
- ²¹ *The Times*, Friday 21 June 1940, p. 8
- ²² see for example MacDonald, pp. 37-39; and John P. Campbell, "Facing the German Airborne Threat to the United Kingdom, 1939-1942", *War in History*, Volume 4, No. 4 (1997)
- ²³ Otway, p. 6.
- ²⁴ Bekker, p. 128; and Hickey, p. 54. The technique of dropping dummies to confuse the defence was subsequently used by the Allies in the invasions of Sicily and Normandy, and they too augmented them with pyrotechnics; see Otway, pp. 119, 124, 177.
- ²⁵ for details and illustrations of this and other copied equipment, see Andrew Steven and Peter Amodio, "British Airborne Forces, 1940-42", *Military Illustrated Past and Present* (MI) No. 54 (November 1992), pp. 21-23
- ²⁶ see Otway, pp. 119, 124, 177
- ²⁷ according to Otway, the coup-de-main idea occurred independently to Major-General Gale, commander of the British 6th Airborne Division, and his subordinate Brigadier Hill. Gale admitted to being inspired by the German examples cited; see Otway, pp. 173-174; for details of the German operation against the Corinth Canal, see MacDonald, pp. 66-67. For the Orne operation, see Ambrose, op cit., and Shannon, op cit.
- ²⁸ see for example PRO AIR 32/2, "Air Borne Troops - Policy For", Document 14, letter from War Office to Air Ministry setting out War Office requirements, dated 10/01/1941.
- ²⁹ the German Z1 parachute obliged the parachutist to land on all fours, and the door of the Junker 52 was so small that exiting the aircraft was a gymnastic exercise. These conditions precluded the carriage of weapons larger than a pistol; see Quarrie, pp. 25-26; and Lucas (Storming Eagles), pp. 367-368
- ³⁰ for details of initial British reliance on containers, see PRO AIR 32/4 Document 7A, dated 19/06/1941; for details of the special sleeves and valises developed subsequently see Otway, pp. 98, 410-411, and plates 22-25, between pp. 196-197

-
- ³¹ for the British definitions of what constituted airborne, airlanding and airtransportable units, see **Airborne/Airtransported Operations No. 4**, p. 1
- ³² see for example Martin Middlebrook, **Arnhem: The Airborne Battle** (London: Viking, 1994), pp. 43-44.
- ³³ all figures quoted from Ellis (France and Flanders), pp. 326-327.
- ³⁴ quoted from Timothy Harrison Place, **Tactical Doctrine and Training in the Infantry and Armoured Arms of the British Home Army**, p. 77
- ³⁵ see "The Army of Tomorrow: How to Make It a Corps D'elite", **The Army Quarterly**, Volume 30, pp. 71-85; for a fuller discussion of the matter, see Chapter Two above
- ³⁶ David Fraser, **And We Shall Shock Them**, p.28; for a brief overview of the lead up, see *ibid.*, pp. 3-24.
- ³⁷ quoted from Terraine (Right of the Line) *op cit.*, p.129.
- ³⁸ Patrick Turnbull, **Dunkirk**, p. 176.
- ³⁹ quoted from Lucas and Cooper, p. 68
- ⁴⁰ Fraser (And We Shall Shock Them), pp. 28-29
- ⁴¹ *ibid.*, p. 29
- ⁴² *ibid.*, pp. 27-28
- ⁴³ Fraser, (Alanbrooke), *op cit.*, pp. 109-110
- ⁴⁴ *id.*, (And We Shall Shock Them), p. 30
- ⁴⁵ see for example Fraser (And We Shall Shock Them), pp. 30-31; for contemporary participant comment, see Brian Bond (Ed) **Chief of Staff: The Diaries of Lieutenant-General Sir Henry Pownall, Volume One**, pp. 280-281, 296; and Kennedy (The Business of War) *op cit.*, pp. 48-49
- ⁴⁶ the original German plan for the assault on the West superficially resembled the Schlieffen Plan, but recent German research has highlighted significant differences in both aim and detail. In the event, the plan was re-jigged to route the main thrust through the French Ardennes near Sedan, which outflanked the BEF and other Allied forces which had moved into Belgium in anticipation of the original; see *Militargeschichtliches* Volume II, pp. 238-253, 285-290.
- ⁴⁷ F. H. Hinsley, **British Intelligence in the Second World War**, p.128.
- ⁴⁸ see for example Alistair Horne, **The Price of Glory: Verdun 1916**, pp. 339-347.
- ⁴⁹ see Hinsley, p.114; and Bekker, pp. 134-136
- ⁵⁰ Hinsley, p. 128.
- ⁵¹ MTP No. 33, March 1940 "Training in Fieldcraft and Elementary Tactics"; cited in Harrison Place, pp. 74-75
- ⁵² *ibid.*, p.75
- ⁵³ *ibid.*, pp. 85-100
- ⁵⁴ see for example Carlo D'Este, **Decision in Normandy**; and Max Hastings, **Overlord**. Both works are cited by Harrison Place in this regard; see pp. 9-18, and pp. 103-122 for a wider discussion. Faults in British infantry training, and especially with regard to co-operation with tanks, are also apparent in German accounts of the fighting in Normandy, although at least one British participant, whilst disputing German superiority *per se*, has also admitted that British training could also have been better; see Michael Reynolds, **Steel Inferno**; and Sydney Jary, **18 Platoon**, pp. 16-18
- ⁵⁵ such as Brooke, Alexander and Montgomery, for example

-
- ⁵⁶ R. L. DiNardo, "German Armour Doctrine: Correcting the Myths", *War In History*, Volume 3 (1996), pp. 384-297. See also Azar Gat, "The Hidden Sources of Liddell Hart's Strategic ideas, in *ibid.*, Volume 3 (1996), pp. 293-308
- ⁵⁷ Alistair Horne, *To Lose A Battle*, pp. 576-582; see also Ellis (France and Flanders), pp. 87-101.
- ⁵⁸ Terraine (Right of the Line), pp. 96-97; for a table of organisation and list of the RAF units involved, see Ellis (France and Flanders), p. 372.
- ⁵⁹ Ellis (France and Flanders), p. 325; for a detailed break down of the aircraft loss figure by Command, see Derek Wood and Derek Dempster, *The Narrow Margin*, Appendix 12, p. 311.
- ⁶⁰ Ellis (France and Flanders), p. 307; and Terraine (Right of the Line), pp. 123, 133-134, 146-147.
- ⁶¹ **Air Historical Branch (AHB)/II/117/2(A): "The Air Defence of Great Britain"**, pp. 100-102; cited in Terraine (Right of the Line), p.73.
- ⁶² see Terraine (Right of the Line), pp. 72-73, 75-76; for a discussion of the differing pre-war policies and attitudes to the provision of fighters for Home Defence, see Smith, *op cit.*, pp. 317-319.
- ⁶³ for details of the fighter component of the AASF, see Terraine (Right of the Line), p. 122; for a table of organisation and a full list of the RAF units involved, see Ellis (France and Flanders), p. 372.
- ⁶⁴ for details see **PRO CAB 65/13**, minutes of War Cabinet meeting dated 15/05/1940; cited in Gilbert (The Churchill War Papers Volume II), pp 41-43; see also *id.*, **Winston S. Churchill, Volume VI**, pp. 338-341, 346-347; and Terraine (Right of the Line), pp. 137-140.
- ⁶⁵ see for example Terraine (Right of the Line), pp. 131-132; and Turnbull, p. 66.
- ⁶⁶ quoted from Arthur Bryant, *The Turn of the Tide 1939-1943*, p. 91.
- ⁶⁷ Bryant (Turn of the Tide), pp. 89-156.
- ⁶⁸ Interview with then Pilot Officer H. A. C. Bird-Wilson, 17 Squadron, RAF; cited in Norman L. R. Franks, *The Air Battle of Dunkirk*, p. 165.
- ⁶⁹ interview with then Squadron Leader J. M. Thompson, 111 Squadron, RAF; cited in Franks, p. 198.
- ⁷⁰ interview with then Pilot Officer H. M. Stephens, 74 Squadron, RAF; cited in Franks, p. 190
- ⁷¹ interview with then Flight Lieutenant A. Hope, 601 Squadron, RAF; cited in Franks, pp. 67-70.
- ⁷² this phrase was used by Air Marshal Sir Cyril Newall, CAS in 1937, referring to the close-support of ground forces in the Spanish Civil War; quoted from Terraine (Right of the Line), pp. 64, 80.
- ⁷³ for the origins and subsequent development of the "knock-out blow" theory, see Chapter Two above
- ⁷⁴ for details of the meeting with regard to the RAF's bombing offensive against the Ruhr, see Terraine (Right of the Line), pp. 140-143; and Gilbert (Finest Hour), pp. 334-335, 342-343.
- ⁷⁵ Terraine (Right of the Line), p. 137.
- ⁷⁶ the scheme for striking the Ruhr originated in 1938; see Smith, pp. 291-296
- ⁷⁷ for details of Dowding's struggle to establish a credible fighter defence, see Terraine (Right of the Line), pp. 71-77; for his support for the strategic bombing proposal at the 15 May 1940 conference, see *ibid.*, pp. 138-141.
- ⁷⁸ quoted from then CIGS Sir Edmund Ironside, in Colonel Roderick Macleod and Denis Kelly (Eds.), *The Ironside Diaries*, p. 304; cited in Terraine (Right of the Line), p. 137
- ⁷⁹ for a detailed break-down of Bomber Command's Order of Battle on 15 September 1940, see Wood and Dempster, Appendix 3, pp. 303-304.

-
- ⁸⁰ the classifications are taken from the RAF's expansion Scheme "F" of 1936; see Terraine (*Right of the Line*), p. 34.
- ⁸¹ for further details of the Stirling's shortcomings, see Terraine (*Right of the Line*), pp. 278-279; for technical details see Thetford, *op cit.*, pp. 459-462.
- ⁸² for a detailed account of this, see Terraine (*Right of the Line*), pp. 95-111.
- ⁸³ quoted from AHB/II/117/1(B), pp. 72-73; for details of the Hörnum raid, see Terraine (*Right of the Line*), pp. 112-113.
- ⁸⁴ see PRO CAB 120/414, minute from PM to Ismay dated 03/06/1940; cited in Charles Messenger, *The Commandos*, p. 26. The same document appears in the *Churchill Papers, 20/13* dated 04/06/1940, as cited in Gilbert (*Churchill War Papers Volume II*), pp. 249-250. The discrepancy is presumably due to a delay in transmission or filing. Given Churchill's habit of working late into the night, the difference is probably one of hours rather than a whole day in any case. The earlier date, 03/06/1940, is cited hereafter for clarity
- ⁸⁵ quotes from PRO CAB 120/414, minute from PM to Ismay, dated 03/06/1940
- ⁸⁶ quoted from PRO CAB 120/414, minute from PM to Ismay, dated 05/06/1940; the same document appears in the *Churchill Papers, 20/13*; cited in Gilbert (*Churchill War Papers Volume II*), p. 251
- ⁸⁷ PRO CAB 120/414, minute from PM to Ismay, dated 05/06/1940
- ⁸⁸ PRO CAB 120/414, minute from PM to Ismay, dated 05/06/1940
- ⁸⁹ for example Fraser (*And We Shall Shock Them*), pp. 328, 391
- ⁹⁰ PRO CAB 69/1, minutes of Defence Committee meeting, dated 19/06/1940
- ⁹¹ quoted from the *Diary of John Colville*, entry for 29/05/1940: cited in Gilbert (*The Churchill War Papers Volume II*), p. 192
- ⁹² *ibid.*, p. 426
- ⁹³ see PRO CAB 120/262, document 1B, letter from PM to Ismay, dated 22/06/1940; the letter is also contained in PRO AIR 2/7338, document 1A, same date
- ⁹⁴ for Churchill's 1917 paper on forming flying columns to deliver troops behind enemy lines, see Blunt, *op cit.*, Appendix "C", pp. 163-169, especially pp. 168-169; for Churchill's 1936 paper see PRO CAB 120/10, War Cabinet Paper dated 16/06/1940; also cited in Gilbert (*The Churchill War Papers Volume II*), pp. 353-354
- ⁹⁵ PRO CAB 120/414, minute from PM to Ismay, dated 03/06/1940
- ⁹⁶ PRO CAB 120/10, minute from PM to War Cabinet, dated 16/06/1940; also cited in Gilbert (*The Churchill War Papers Volume II*), pp. 353-354
- ⁹⁷ quoted from PRO CAB 120/262, letter from PM to Ismay, dated 22/06/1940; the letter is also contained in PRO AIR 2/7338, document 1A, also dated 22/06/1940
- ⁹⁸ Otway, p. 21; HMSO, *By Air to Battle*, pp. vii, 7; and Saunders, *op cit.*, p. 27
- ⁹⁹ Hickey, *op cit.*, p. 74; and Julian Thompson, *Ready for Anything*, p. 3. Hickey, incidentally, dates the directive to 6 rather than 5 June 1940
- ¹⁰⁰ For a brief account, see Otway, pp. 63-70
- ¹⁰¹ PRO CAB 120/414, minute from PM to Ismay, dated 03/06/1940
- ¹⁰² PRO CAB 120/414, minute from PM to Ismay, dated 05/06/1940
- ¹⁰³ PRO CAB 120/262, letter from PM to Ismay, dated 22/06/1940

¹⁰⁴ PRO AIR 2/7338, document 01B, extract from Chiefs of Staff Meeting to PM, dated 06/08/1940

¹⁰⁵ PRO CAB 120/262, letter from PM to Ismay, dated 27/05/1941

CHAPTER FOUR

Immediate Reactions: Churchill's Directives, the Army, and the RAF, 4 June - 15 July 1940

As might be expected, the reactions of the War Office and the Air Ministry to Churchill's parachute directive of 5 June 1940 varied considerably, although not necessarily in the way that the individual circumstances of the two arms would have suggested. This chapter will therefore examine immediate Army and RAF reactions to the parachute directive. These merit close and specific examination, because they set the tone not only for the establishment of a British airborne force, but also for its subsequent development. The chapter will then detail the initial development of measures initiated by both services to meet the parachute requirement.

I. Coincidental with a Shifting of Attitudes: The Army's Immediate Reaction to Churchill's Raiding and Parachute Directives

The Army could have been forgiven for reacting badly to Churchill's directives, given its straitened circumstances following the evacuation from the Continent. However, the War Office accepted them with equanimity, if not outright enthusiasm, a reaction which merits explanation. There were two major reasons for this. First, the idea of a raiding force dovetailed into a pre-existing War Office interest in irregular operations. This dated from the mid-1930s, when the General Staff (Research) (GS(R)) section was established with a staff of two. Major J. C. F. Holland RE, GS(R)'s second commander, launched an investigation into guerrilla operations in future wars in 1938, prompted by personal service in the Middle East during the First World War, service in Ireland in the early 1920s, and by events in Spain and China. This change of Army focus was paralleled by the Foreign Office which, prompted by the rapidly deteriorating situation in Europe, also established two departments for the same purpose in 1938. These were named EH and Section D, which were to "...investigate every possibility of attacking potential enemies by means other than the operations of military forces".¹

GS(R) was expanded and renamed Military Intelligence (Research) (MI(R)) in 1939, and Major Colin Gubbins MC joined the department in April that year. Gubbins had a background in irregular warfare beginning in Russia in 1919, subsequently in Ireland. MI(R) was authorised to pursue three specific tasks: "To study guerrilla methods and produce a guerrilla FSR; To evolve destructive devices...suitable for use by guerrillas"; [and] To evolve procedure and machinery for operating guerrilla activities, if it should be decided to do so subsequently".² Gubbins produced three pamphlets, entitled "The Art of

Guerrilla Warfare”, “How to Use High Explosives”, and “The Partisan Leader’s Handbook”. He also travelled covertly to Rumania, Poland and the Baltic States to investigate the “...possibilities of guerrilla action among Germany’s eastern neighbours”, and was attached to the British military mission in Warsaw under MI(R) auspices on 25 August 1939.³ MI(R)s irregular work expanded with the outbreak of war. It was involved in an abortive scheme to send a ski battalion to Finland and formed “Guerrilla Companies” to serve in Scandinavia following the German invasion in April 1940, commanded by Gubbins.⁴ Renamed “Special Infantry Companies” and finally “Independent Companies”, ten such units were formed in mid-to-late April 1940, using volunteers drawn from second-line Territorial Army Divisions. Five saw action in Norway before evacuation Scotland by 10 June 1940.⁵

The second main reason for the Army's favourable reaction to Churchill's raiding and parachute directives was because the Army was accustomed to co-operating with its sibling services. As we have seen, co-operation with the RAF in the empire was widespread in the inter-war period, and the Army had an even longer record of amphibious co-operation with the Royal Navy (RN) that pre-dated the First World War. This was largely *ad hoc* in nature before 1914, although the Gallipoli landings prompted interest in more formalised arrangements.⁶ The impetus for this was handicapped after 1918 by a divergence between amphibious theory and practice, exacerbated by a combination of funding limitations and a perceived lack of need for a coherent amphibious strategy. However, interest was maintained through low level contingency planning, mainly through the staff colleges, along with a limited amount of practical work. From 1924, for example, small-scale amphibious operations were carried out on an annual basis, and a new Manual of Combined Operations was issued in 1925. In 1930 an invasion exercise was held on the Isle of Wight, and in 1934 the Army's 5th Division carried out landings on the Yorkshire coast, including tanks, motor landing craft and smokescreens.⁷

Inter-service co-operation received a boost in 1936, with the formation of a committee to revise the Combined Operations Manual. The committee recommended the creation of a Deputy Chiefs of Staff Committee on Inter-Service Training (DCOS(IT)), and the establishment of the Inter-Service Training and Development Centre (ISTDC) to develop the necessary techniques and equipment. Established the following year, the DCOS (IT) and ISTDC were originally intended to address all forms of inter-service co-operation, but in the event became focussed exclusively on amphibious matters due to pressure from the Admiralty. Both the War Office and Air Ministry complained about the preoccupation of the revised Combined Operations Manual with amphibious matters, but to little avail, not

least because the rapidly deteriorating situation in Europe diverted attention to more pressing matters.⁸

Interestingly, the RAF representative to the DCOS(IT) urged the inclusion of airborne troops in the ISTDC remit. The DCOS(IT) issued at least one memo on the matter, and it was also suggested that the commandant of the ISTDC should attend French parachute trials in 1939.⁹ The fact that the French disbanded their experimental parachute unit that same year may explain why the matter appears to have lapsed,¹⁰ although the Air Ministry interest explains why the RAF compiled a modest store of intelligence on German airborne forces that was to prove useful after Churchill issued his parachute directive.¹¹ That said, the Air Ministry response to Churchill's directive detailed below does not suggest that it was considering the formation of a large-scale airborne force on the German model. It is therefore more likely that the Air Ministry was thinking along the lines of a small-scale sabotage force to augment Bomber Command's capabilities, if they were seriously considering the idea at all.

Be that as it may, the War Office also pre-empted Churchill's parachute directive, albeit by a much narrower margin. The driver in this instance was the public interest generated by the spectacular German airborne demonstration in the Low Countries, which led to the matter being raised in the House of Commons. The German use of airborne troops caught the British public imagination in a big way. Every issue of *The Times* between 11 and 22 May 1940 contained numerous references to the subject, and it remained a popular topic thereafter, particularly in the "Letters to the Editor" section. These included fairly accurate reporting of events,¹² erroneous reports of German paratroopers in Holland wearing British uniforms,¹³ appeals for "country gentlemen" to refrain from taking "flying or running shots at...missionaries of Hitlerism dropping from the skies",¹⁴ and optimistic claims that the new threat had been successfully mastered.¹⁵

Public perceptions of the threat were consequently somewhat muddled, with an understandable tendency to confuse paratroopers with Fifth Columnists in a variety of "abominable" disguises, including "...nuns, Red Cross nurses, monks, tram car conductors, policemen and postmen".¹⁶ Such paranoia was not a uniquely British phenomenon. A contemporary Czech writer on airborne matters, for example, claimed to have first-hand evidence of similar ploys being employed at Lowicz in Poland on 4 September 1939. Three "paratroops", disguised as a nun, a policeman and a schoolboy, were apprehended after all three were found to be bruised from their parachute harnesses; the nun apparently compounded her error by wearing silk underwear.¹⁷ The source and veracity of such

accounts are difficult to identify, but British public perception of the airborne threat was sufficient to allow Secretary for State for War Anthony Eden to appeal successfully for the formation of Local Defence Volunteer units as a counter-measure.¹⁸

Popular interest in German airborne activity led to the matter being raised in the House of Commons. On 4 June 1940 Mr Frederick Cocks, MP for Nottingham Broxtowe, asked the Secretary of State for War whether he intended to organise a corps of parachutists and gliders. This evoked a rather evasive response, which invoked the National Interest in an attempt to stymie further discussion on the subject. This prompted Mr George Garro Jones, MP for Aberdeen North, to cut straight to the heart of the matter in the following exchange:

Mr Garro Jones: "Is the right Honourable Gentleman not aware that operations of this kind have been in process of experiment in other countries for many years; and is this the first time that they have come under the study of the British War Office?"

Mr Eden: "I never said that."

Mr Garro Jones: "I am asking the right Honourable Gentleman whether this form of warfare, which has been experimented on by foreign armies over the last three years, has been equally studied by the British War Office."

Mr Eden: "The reply which I made referred to recent operations and it is those recent operations, which are a new development of a method practised before, which are now being studied".¹⁹

The short answers to Mr Garro Jones' questions were no, yes and no respectively, but hecklers spared the Secretary of State for War further embarrassment by reducing the exchange to a shouting match. However, Mr Cocks' original question was no surprise to the War Office, which had formulated the Secretary of State for War's initial evasive response, probably on 3 June 1940.²⁰ The question also prompted an internal War Office minute entitled "Creation of a Parachute Corps", which was also issued on 4 June 1940:

"This idea [the formation of a parachute force] has real possibilities at the present time. The objection will come from the RAF e.g. provision of special equipment and troop carrying aircraft. Will you make a short preliminary investigation into the possibilities of putting it into effect?"²¹

Given the relative timing of these documents, and given the fact that they are filed together in sequence, and the fact that they use similar wording (both refer to creating a "corps"), it is reasonable to assume that the Parliamentary question was the driver for the War Office

instruction. Thus, as with the raiding force directive, the War Office was ahead of Churchill, albeit probably only by a matter of hours in this instance.

It is possible that Churchill communicated his parachute requirement to the War Office privately, although this is unlikely given the current evidence. Churchill's first explicit reference to raising parachute troops came the day *after* Mr Cocks raised the matter in the House (on 5 June 1940). Consequently, it is logical to assume that the Prime Minister reacted by appending his parachute requirement to his eclectic 5 June 1940 list of offensive measures for the Joint Chiefs of Staff.²² It would be wrong to make too much of the parliamentary angle, given that Churchill had hypothesised on airborne matters back in 1917,²³ and again in 1936.²⁴ It would also be wrong to over-emphasise the importance of the War Office minute of 4 June 1940. This called only for a "short preliminary investigation", whereas Churchill's directive was a direct executive order to raise a parachute force. As a result, the belated War Office initiative was overtaken and subsumed by the Prime Minister's directive. Nevertheless, the fact that matter was raised in the House, and that the War Office launched a parachute investigation of its own volition casts the widely held and oft quoted view that Churchill was solely responsible for the decision to establish a British airborne force in a different light.²⁵

Raising a parachute force was more problematic than raising an amphibious raiding force, not least because the War Office lacked the meagre experience accrued by MI(R) and the ISTDC. However, the high degree of "air-mindedness" which characterised the Army in the Empire in the inter-war period offset this lack to some extent, as did a pool of intelligence gathered on foreign airborne forces. Observers reported on the Soviet airborne manoeuvres in the late 1930s,²⁶ and British military attachés and intelligence officers closely monitored German developments.²⁷ The latter's reporting was very accurate, and some of it was released in the press. **The Times** published an article on 15 May 1940 that correctly detailed German operational jumping heights, and stressed the need for paratroops to be well drilled "...so that they pour rapidly from the aircraft".²⁸ Interrogation of the 1,600 German airborne POWs from Holland incarcerated in Britain, and examination of their special equipment expanded knowledge further.²⁹ This is clear from the detailed précis presented at an Air Ministry conference on 10 June 1940.³⁰ Military information was also responsible for the extremely accurate, two-view drawing of a fully equipped German paratrooper which appeared in **The Times** on 8 June 1940; the original is filed in the Public Record Office.³¹ This information was gathered for defence rather than imitation, for small-scale German airborne landings in Britain were considered a

possibility almost from the opening of hostilities in September 1939.³² However, the data gathered provided an equally valuable template for the establishment of a similar force.

It can therefore be argued that the existence of MI(R) and the ISTDC, the low-level War Office investigation of the airborne idea initiated on 4 June 1940, and the pool of intelligence gathered on foreign airborne efforts explain the favourable War Office reactions to Churchill's directives. In short, the Prime Minister was ordering the War Office to commence a course upon which it had already embarked of its own volition, by however narrow a margin. Churchill's raiding and parachute directives thus confirmed the War Office's appreciation of the realities of the situation and, more importantly, legitimised the expansion and implementation of measures to meet them. GS(R)/MI(R) and the ISTDC should not therefore be viewed as initiatives that were unable to "...make much headway against the traditionally hidebound directorate of military operations, which ran between the blinkers of King's Regulations and Army Council Instructions."³³ Rather, they were shrewd, low-cost insurance policies, the initial scale of which was dictated by the realities of an overstretched Army and a tightly stretched military budget, as opposed to Blimpish tendencies within the Army. Such tendencies did exist, of course, but their influence here should not be overstated.

The War Office failure to take out a similar airborne insurance policy says as much about Army-RAF relations as the Army's attitude to the matter, and in particular about the realities of dealing with a wilful, independent and single-minded air arm bent on pursuing its own divergent priorities. The success of unofficial Army-RAF co-operation in the Empire meant there was no pressing need for the War Office to challenge the *status quo*, either in the inter-war period or up until June 1940. Then, however, the defeat in France totally transformed the prevailing circumstances, and simultaneously created a need and a role for a home-based British airborne force. This is clear from the rapidity with which the War Office began to formulate a broader role for its new parachute force. By July or early August 1940 at the latest, the senior Army officer present at RAF Ringway was recommending the new force be reserved for important tasks like the "...capture of a Channel port for an invasion of France".³⁴ Within six months the War Office presented a formal requirement for two all-arms "Aerodrome Capture Groups", with organic light tank, artillery, and anti-aircraft and anti-tank units.³⁵ The War Office minute of 4 June 1940 shrewdly and correctly assessed the likely Air Ministry reaction to raising a parachute force. Churchill's parachute directive of 5 June 1940 thus provided the War Office with the means to overcome RAF intransigence in pursuit of what was now considered a military necessity.

There were other, less tangible reasons for the War Office acceptance of Churchill's raiding and parachute directives. The War Office must have been motivated by a desire to restore the Army's reputation, badly sullied by the debacle in France, and by the unpalatable sight of the rival RAF, with whom relations stood at an all-time low, taking centre stage against seemingly imminent German invasion. A major plank in the Air Ministry's long and successful campaign to maintain its independence involved projecting the RAF as a modern hi-tech force, and it would not be unreasonable to assume that the War Office had absorbed the same lesson. Forming a parachute unit of its own would allow the Army also to portray itself as modern and dynamic, willing to learn from past mistakes, and prepared to adopt and utilise the latest military techniques. It would also allow the Army to capitalise on the public fear of parachutists and fifth columnists by providing a tangible counter-measure, in much the same way as the RAF exploited popular fear of aerial bombing in the 1930s to support its strategic bombing pretensions.

The War Office may also have been looking to deflect criticism for failing to investigate the airborne idea earlier. It cannot be entirely coincidental that the War Office decided to launch a preliminary investigation into raising a parachute force just as it became apparent that it was about to become a matter of public political debate. In addition, the hostile questioning by Mr Garro Jones made it clear that the War Office's perceived failure had not gone unnoticed. Initiating a belated investigation as a damage limitation exercise would be a logical move in such circumstances. However, it is doubtful that these background issues drove the policy-making process, although the Army did make good use of its airborne arm for propaganda purposes.³⁶ Sir Laurence Olivier's 1944 film of Shakespeare's **Henry V**, which was released on the eve of D-Day in 1944, was specifically dedicated to "Britain's Commando and Airborne Troops".³⁷ This came a significant period after the establishment of a British airborne forces, however, and shows policy driving public relations rather than vice-versa.

Public and inter-service relations therefore played only a minor and probably largely subliminal part in the establishment of a British airborne force. The crucial factor was the War Office's own appreciation of the new realities and needs of the British military situation, which fortuitously coincided with Churchill's. Given this, it is possible to examine how the British airborne force was actually established. As the War Office chose to include raising a parachute force within the larger establishment of its Commando raiding force, this is best achieved by examining the latter development in order to place events in context.

II. Generally Positive: The Army's Response to Churchill's Raiding Directive

A practical Army response to Churchill's raiding directive of 4 June 1940 was swift. Inspired by Boer operations in South Africa, Lieutenant-Colonel Dudley Clarke wrote a note on raiding parties, and suggested that the new force be called Commandos in their honour.³⁸ The note was presented at the Chiefs of Staff meeting on 6 June 1940 to discuss Churchill's directives, and Clarke's scheme was approved two days later,³⁹ with the proviso that "no unit was to be diverted from the essential defence of the British Isles, and the new force must make do with a minimum of arms".⁴⁰ On 9 June 1940 the Director of Recruiting and Organisation (DRO) at the War Office despatched a detailed letter to Northern and Southern Commands. Entitled "Volunteers for Special Service" this informed them that:

"It is proposed to raise and train a special force of volunteers for independent mobile operations. You are requested to collect the names of up to 40 officers and 1,000 other ranks in your Command...who you consider suitable for it. Volunteers will be employed on fighting duties only, and Commanding Officers should be assured that these duties will require only the best type of officers and men."⁴¹

Volunteers were to be young and fit, preferably able to swim, immune to seasickness, and to have experienced active service. Driving and sapper training were considered particularly valuable. Officers were expected to display "...personality, tactical ability and imagination", whilst other ranks were to exhibit a good standard of intelligence, independence of character and a healthy respect for private property. The letter specified that the non-commissioned volunteer should be capable of behaving "...himself without supervision (there must be no risk of looting etc. by men operating independently)". Service with the new force was only expected to last for a few months, and all ranks were to be selected by personal interview, which would make explicit the nature and conditions of their duties. Prospective volunteers were then free to withdraw their application if they wished. The leaders of the proposed units were to be lieutenant-colonels or below, and the names of six to eight officers "considered capable of leading a Commando" were to be passed to the War Office as quickly as possible "under secret cover".⁴²

Two further memos from the Director of Military Operations and Planning (DMO&P) at the War Office, Major-General R. H. Dewing, refined the volunteer requirement and laid the groundwork for their organisation. The first, issued on 12 June 1940, was addressed to the DRO and recommended extending the call for special service volunteers to all Home Commands.⁴³ The second was issued the following day, and made detailed proposals

regarding the raising, organisation and employment of the new Commandos.⁴⁴ A total force of two hundred officers and 5,000 men was suggested, with each Home Command appointing one or two Commando leaders. These would select Troop leaders, who would in turn interview and select their own men. A Commando establishment of ten troops of fifty men, including one or two officers, was recommended. The administrative tail was virtually non-existent, with equipment to be issued from and returned to a central pool for operations. No accommodation was provided, for all ranks were to be provided with money to make their own arrangements. The intent was to “...provide no more than a pool of specialised soldiers from which irregular units of any size and type can be very quickly created to undertake any particular task”.⁴⁵

The DMO&P's proposals were accepted in principle at an Army Council meeting on 17 June 1940.⁴⁶ Telegrams and letters extended the call for volunteers to all Home Commands the same day,⁴⁷ with the proviso that no volunteers be accepted from the 3rd Division which was earmarked for home defence.⁴⁸ The Commando organisation was formalised at a War Office conference on 20 June 1940. Existing Independent Companies were to be amalgamated into No. 1 Commando,⁴⁹ with eleven more sequentially numbered Commandos. All were to remain under the operational control of the War Office, but were to be administered by their local Home Commands, which were to appoint an administration officer for the purpose.⁵⁰ Specific Home Command responsibilities and proposed locations for the Commandos were detailed in a separate memo issued the same day. Three were to be raised by and/or located in Southern Command and Western Command respectively, two each by Northern and Eastern Commands, and one each by Scottish and Northern Ireland Commands. An organisation chart with suggested ranks and appointments was attached to the memo, although the size of each Commando was to be determined by the GOC of each Command according to the number of available volunteers.⁵¹ All nominated Commando leaders were to be detached from their respective Home Commands for assembly at the War Office on 24 June 1940.⁵²

A sub-division of the Adjutant General's department, AG 17, handled the War Office end of things. Code-named “Forcedly Seventeen”, it rapidly became the focus for a great deal of paperwork as the Home Commands came to terms with the Commando commitment. The place of Commando volunteers within the Army bureaucracy was firmly established in a memo to all Home Commands from the DRO on 26 June 1940. This gave precise details of the procedure for selecting volunteers, and formalised their conditions of service. Volunteers were to be self-reliant, were responsible for securing their own “food and lodgings”, could be returned to their original units (RTU'd) at the discretion of their

Commando OC, and were free to follow this course themselves at the end of any active operation.⁵³ Special monetary allowances were payable for food, accommodation, heating fuel and lighting, at a daily rate of thirteen shillings and four pence for officers and six shillings and eight pence for other ranks.⁵⁴ This was in addition to normal pay, including any trade or proficiency rates, and was also payable during leave or sickness, although this was revised in October 1940.⁵⁵ Such conditions of service were unusual in a modern army to say the least, but were justified by the prevailing circumstances.

The speed of the Commando establishment created problems for the future. The lack of administrative staff was amongst the first to come to light. Western Command requested, and was refused, additional administrative personnel for No. 2 Commando as early as 29 June 1940,⁵⁶ thereby prompting the DRO to clarify the situation. All Commando headquarters personnel, excluding the OC and one administrative officer, were to be provided by the Home Command responsible for its formation.⁵⁷ This did not forestall similar requests and complaints throughout July 1940, however.⁵⁸ The food and accommodation arrangements also proved problematic, particularly when Commandos moved to poorly resourced areas, and brought the War Office into conflict with the Ministry of Food.⁵⁹ In addition, administrative short cuts actually produced more rather than less work in some instances, such as those regarding pay. Normal pay and special Commando allowances were paid by the Home Command responsible for raising the Commando, but family or dependants' allowances and any allotment pay were paid by the volunteer's original unit.⁶⁰ Consequently, two sets of pay records had to be maintained for each volunteer at widely separated and frequently shifting locations.

Churchill's directives were thus well received at the War Office and General Staff level, but reactions lower down the chain are harder to quantify. At least one harried staff functionary bemoaned to a colleague Churchill's "harping on the fact that he said 5,000 parachute troops were to be got ready",⁶¹ and the views of unit commanders on having their best and most aggressive personnel siphoned off can be well imagined.⁶² The War Office recognised this and attempted to minimise the deleterious effects, although it still opted to call for volunteers across the board rather than re-designating an existing formation,⁶³ an option which might have caused less disruption. On the other hand, the ceiling of one thousand and forty volunteers from each Home Command was relatively low, and the dearth of administrative arrangements must have simplified matters considerably. The War Office was also aware of the traditional response to such calls, which was for units to use it as an opportunity to purge themselves of undesirables. The wording and depth of the 9 June 1940 letter made very clear that this was not an acceptable

response, and the selection of volunteers by interview, however rudimentary, provided a backstop against such tendencies.⁶⁴ The idea certainly appears to have been popular, given that sufficient volunteers were ultimately found to form and maintain ten and a half Commandos of the projected twelve, each with a strength of five hundred all ranks.⁶⁵ It is also safe to assume that the total of volunteers outnumbered those selected, for it is doubtful that every volunteer met the required standard.

Although the response may have been more than adequate, it would be a mistake to assume this indicated wholehearted acceptance of the Commando policy. The stated short-term nature of the commitment may have offset opposition, for the 9 June 1940 letter clearly stated that individuals were only expected to remain with the new force for “a few months”.⁶⁶ Consequently, before long units began to enquire when their volunteers would be returned. GOC Northern Command was relaying such enquiries from subordinate units to the War Office by the end of July 1940, and added a rider of his own:

“The formation of Commandos has of course drawn very heavily on the best personnel of units, which will suffer a serious loss should these men not return...I recommend, therefore, that if possible arrangements be made for personnel of Commandos, on completion of their special service, to be returned to their original units.”⁶⁷

This presumably prompted the CIGS, General Sir John Dill, to raise the matter with the War Cabinet Chiefs of Staff Committee on 6 August 1940. Dill favoured the Commando proposal but pointed out that the rest of the Army needed the high calibre volunteers, whom he considered to be potential officers. He therefore requested that volunteers be returned to their units of origin “...if there was no prospect of the Commandos being used for offensive operations”.⁶⁸ Similar sentiments were expressed by the GOC Southern Command in October 1940,⁶⁹ and by Western Command, who complained that uncertainty over the future issue was affecting the “...morale and keenness of volunteers and home units”.⁷⁰

Home Forces Command and their subordinate Commands were also tardy and selective in implementing some aspects of the Commando initiative, although this could have been the result of poor administration rather than deliberate obstruction. For example, Eastern Command did not transmit the order to release selected volunteers from 52, 18 and 55 Divisions until AG 17 issued a request for immediate compliance on 22 October 1940.⁷¹ There may also have been some doubt over long-term intentions. The War Office temporarily suspended Commando recruiting on 22 August 1940,⁷² and then took over a month to rationalise the future shape of special forces *per se*.⁷³ As most Commandos were

still organising themselves this caused a good deal of confusion, not least because many were still below War Establishment.⁷⁴ Recruiting recommenced on 1 October 1940, with a CIGS order for all Commandos were to be brought up to strength “within a week”.⁷⁵ AG 17 informed Home Forces HQ and subordinate Commands it was “essential for ALL [original emphasis] Commandos [to] be brought up to strength forthwith” on the same day.⁷⁶ Home Forces HQ, however, signalled all Home Commands that Commandos were to be brought up to strength at the discretion of their individual GOCs.⁷⁷ Consequently, Southern Command refused outright to bring Nos. 7 and 8 Commandos up to strength, pointing out that it was “...averse to depriving field units of further selected personnel”, and suggesting that henceforth Commando volunteers be selected from Infantry Training Centres (ITCs) instead. AG 17 was obliged to invoke the authority of the CIGS to force compliance, against Southern Command and Home Forces HQ when it supported its subordinate.⁷⁸

Army acceptance of the raiding directive was therefore not universal or unequivocal, which was hardly surprising in the prevailing circumstances. However, a combination of perceived necessity, high level support and widespread enthusiasm was sufficient to ensure that the foundation of the Commando force was fulfilled in practical terms. It will now be necessary to examine how the establishment of a parachute force fitted into this process.

III. Airborne Embryo: The Initial Establishment of a British Parachute Force

The 9 June 1940 call for volunteers for special service did not mention parachuting, because a preliminary War Office investigation into the matter initiated on 4 June 1940 was incomplete.⁷⁹ However, on 10 June 1940 approval was sought from the Chiefs of Staff for the establishment of a “parachute division at Home”.⁸⁰ As a result, a 12 June 1940 memo from the DMO&P, which recommended extending the call for volunteers to all Home Commands, was also responsible for placing the parachute force within the Commando framework, as the closing paragraph of the memo clearly shows:

“Since parachutists, once landed, will operate in much the same way as any other irregular troops, it is proposed to make use of the Commando Organisation outlined in the 9 June letter...[therefore a separate list of parachute volunteers is required because]... It is not intended to employ any of the volunteers for Special Service in parachute units unless they specifically say that they are willing to serve in them.”⁸¹

This was the first official acknowledgement that the War Office intended to raise a parachute force, although the ultimate role of such a force had yet to be ascertained. The

DMO&P chose to class parachute troops with other irregular troops, but this may well have been solely based on administrative convenience. On the other hand, it is possible that the DMO&P was following a lead from above, given that the Army Council included the parachute question in a meeting to discuss the raising of "Special Parties" on 17 June 1940. The same Army Council meeting approved the DMO&P's recommendation that separate lists of parachute volunteers be compiled by each Home Command. Telegrams enforcing this were despatched the same day, with the letters extending the call for special service volunteers.⁸²

The War Office formalised the overall Commando organisation on 20 June 1940, and authorised the establishment of a parachute Commando of five hundred men at the same time. This was a smaller than standard force, dictated by the dearth of RAF training facilities, but with the possibility of expansion later.⁸³ The conference conclusions issued details of Commando designations, and their locations. Within this, No. 2 Commando was officially designated as a "Parachute Commando", to be located at Manchester. Special formation instructions were also included, with responsibility for forming ten letter-designated Troops of fifty spread across all Home Commands. Northern and Southern Commands were to raise A and B, and C and D Troops respectively. Eastern Command was to provide E and F Troops, whilst Western Command was to raise G Troop and a proportion of H Troop. Northern Ireland Command was to raise the remainder of H Troop, and Scottish Command was to raise J Troop. Southern Command was also responsible for designating a suitable Commando leader.⁸⁴

Southern Command was first off the mark. A telegram despatched to AG 17 on 26 June 1940 detailed the names and ranks of six designated Troop leaders and Troop officers currently interviewing and selecting troops for "number 2 Commander (sic)".⁸⁵ Internal instructions were disseminated to all Southern Command subordinate formations units two days later, with formation and concentration details for its designated portion of No. 2 Commando. C and D Troops were to concentrate at the barracks of 54 Training Regiment at Perham Down on 1 July 1940, under the command of Major C. J. Jackson RTR. A list of Troop leaders and officers was included, and Major Jackson was instructed to acknowledge compliance and when his force would be ready to move. Its tentative destination was Manchester.⁸⁶ Western Command were also advised of this progress, and requested additional administrative personnel and equipment "...for No. 2 Parachute Commando at Ringway near Manchester" from the War Office on 29 June 1940.⁸⁷ RAF Ringway, formerly Manchester Airport, was the location selected by the Air Ministry for their new parachute training establishment, which began formation on 1 June 1940.⁸⁸

Major Jackson assumed command of No. 2 Commando at Ringway on 3 July 1940. As no billets were available on the RAF station, the volunteers secured their own accommodation at the nearby village of Knutsford.⁸⁹ The Commando billeting system later attracted much criticism, but in this instance it provided a fortuitous means of overcoming the lack of facilities at Ringway. In fact, the Central Landing School (CLS), as the RAF parachute training establishment was by then known, officially requested that No. 2 Commando be granted permission to retain the system in August 1940.⁹⁰ Precisely what proportion of No. 2 Commando arrived with Major Jackson, or was already present, when he arrived to assume command is unclear. It is logical to assume that he was accompanied by C and D Troops, although the CLS Operational Record Book refers to B and C Troops and (by then) Lieutenant-Colonel Jackson commencing parachute training on 9 July 1940.⁹¹ This means that at least one of Northern Command's parachute Troops was also at Ringway by that date. This is reinforced by a secondary source, which refers to fifty soldiers arriving at Ringway on 27 June 1940 with Captain John Rock RE, the War Office representative to the CLS.⁹²

Nonetheless, it was some time before No. 2 Commando was assembled in its entirety. On 14 July 1940 the War Office instructed Northern Ireland command to select a Troop commander and the necessary personnel for its contribution to H Troop, but not to concentrate them until further notice because RAF training facilities were not ready.⁹³ The order was not acknowledged or passed on until 29 July 1940. The delay may have been caused by the selection of a leader for H Troop, given that the name of the chosen individual was included in the eventual response. It may also have been due to the revision of Commando recruiting criteria that occurred on 14 July 1940.⁹⁴ J Troop took even longer to reach full establishment. Scottish Command reported the posting of three subalterns to No. 2 Commando "to complete the establishment of J Troop", as late as 9 September 1940.⁹⁵

The delay in concentrating No. 2 Commando may also have been compounded by a lack of suitable volunteers, because parachute selection required a tighter profile than the original Commando criteria. Practical experience at Ringway obliged the DRO to issue an update on 30 June 1940. This specified that parachute volunteers should:

- a. not weigh more than 250 lb. fully clothed and lightly equipped, i.e. gross weight in the air
- b. be able to pass comfortably through a circular aperture, 3 ft in diameter when wearing equipment and parachute

c. have no physical disabilities which might render them unsuitable for parachute work, e.g. thin skulls and weak ankles".⁹⁶

Medical suitability was relatively easy to establish, but it is less clear how the remainder could be accurately verified in the prevailing circumstances. The RAF was experiencing an acute shortage of parachutes and ancillary equipment at the time,⁹⁷ which must have been a major obstacle for Troop officers attempting to assess candidate suitability, even allowing for *ad hoc* improvisation. It is therefore highly likely that some proportion of the original parachute volunteers was unsuitable because of the broadness of the original Commando requirement, and that a lack of parachutes allowed more unsuitable candidates through after the selection criteria were tightened. The psychological stress of parachuting exacerbated the problem further. By 21 September 1940 only three hundred and forty-two volunteers of the original five hundred were judged suitable by the CLS staff to undergo a full course of parachute instruction. No. 2 Commando thus sustained a "...wastage rate of some 15 per cent over a period of two months",⁹⁸ and Lieutenant-Colonel Jackson was authorised to tour all Home Commands in an attempt to rectify the shortfall.⁹⁹ AG 17 was still complaining that No. 2 Commando was understrength in November 1940.¹⁰⁰

However, as with the wider Commando establishment, these problems only became apparent over time, and were to be expected in the circumstances. The important point is that the War Office had implemented measures to raise a parachute force with impressive speed. A proportion of the new force was assembled and in position to commence parachute training by 3 July 1940, within a month of the War Office's preliminary investigation and Churchill's directive, and within thirteen days of official authorisation being granted by the War Office. This, however, was only half the story, for the establishment of a parachute force was a joint Army-RAF venture. It will therefore now be necessary to examine the reaction and response of the Air Ministry to the parachute directive.

IV. Covertly Unfavourable: The Air Ministry Reaction to Churchill's Parachute Directive

Churchill's parachute directive of 5 June 1940 appears to have been the Air Ministry's first inkling that the raising of a parachute force was being considered. Its reaction, once appraised, was as swift as that of the War Office to Churchill's raiding directive. On 8 June 1940 a detailed preliminary note was circulated within the Air Ministry, and a conference to discuss the matter was held two days later, on 10 June. The content of this preliminary note and the conference proceedings are vital to establishing Air Ministry

reactions, and therefore merit close examination. The preliminary note was a three-page document from the Air Ministry's Director of Plans, Sir John Slessor. Entitled "Development of Parachute Troops",¹⁰¹ it informed recipients of Churchill's order for 5,000 parachute troops, and that the Chiefs of Staff had agreed in principle. It also stated that the matter had been passed to the General and Air Staffs for execution, and that a Parachute Training Centre (PTC) was to be set up as quickly as possible.

Thereafter, however, the note became markedly less co-operative. It was considered "...clearly unnecessary, anyway to begin with, to attempt to produce an organisation capable of dropping 5,000 - policy should [be to] develop facilities for 1,000". At least one recipient felt that this eighty per cent reduction was insufficient, and pencilled a suggestion that it be reduced to five hundred "...so as to ascertain in practice the possibilities and extent of this new commitment". It was considered vital to agree a framework for discussion *before* meeting the General Staff, ostensibly because this would enable planning on "long term" matters like the provision of parachutes and aircraft for the PTC to begin. The third stage would then be a joint conference with the War Office, to discuss the organisation of the new force and its training needs. Once "general agreement" had been reached, the fourth and final stage could commence, and the matter could then be passed to the Air Ministry's Staff Office (AMSO) and Assistant Chief of Air Staff (Training) (ACAS(T)) who, in conjunction with the War Office, would oversee formal establishment of the new parachute force.

Having settled the matter of inter-service co-operation to its own satisfaction, the note then listed several "general points" for consideration. First was the establishment of the PTC, in particular where the aircraft and crews were to come from, and where it was to be located. There was also the matter of parachutes, given that it was "understood that the normal service parachute was unsatisfactory to carry a soldier and his impediments". This meant a special parachute might have to be developed, and it was suggested that reference be made to the Air Ministry's Director of Intelligence (AMDI), who had "...a great deal of material on...German parachute equipment and training". It was also assumed that the parachutists would not be part of the air force on the German model, but that the Army would be responsible for their training whilst the RAF provided the aircraft to carry them. There was, however, no question of special RAF units being formed for this purpose, because no provision had been made for such an eventuality in the Air Ministry's existing production or personnel programmes:

“In any event, it would be uneconomical in the present circumstances. We may be able to consider it when we have more crews and more aircraft production than we want for bombers, which will not be for a very long time.”

It was therefore recommended that dropping parachutists be an alternative role for bombers, and whilst it was possible that a specific Bomber Group could be selected for such work, it remained to be decided which type of bomber was most suitable for “decanting” parachutists. The idea was also mooted that in the future some bomber squadrons might be equipped with transport aircraft as well, so that the same aircrew could fly them “...on the special occasions when parachute troops are required to be used”. This provoked a further marginal note stating that “We [the Air Ministry] should simultaneously consider what reduction if any in total bombing power is involved, if later it was decided”. The note closed by suggesting that its contents should form the basis for discussing the proposed scheme with the War Office.

This note provided the basis for further discussion at the high level Air Ministry conference on 10 June 1940. The conference began with the disparaging and inaccurate opinion that “much of the effect [of parachute troops] was due to surprise that they were used at all [and] this has now worn off”, and then examined the issue point-by-point.¹⁰² Four categories of mission were envisaged; sabotage attacks, holding attacks for demolition or the seizure of vital points, reinforcing front-line units, and flank or rear attacks. Responsibility for providing the necessary troops was placed on the War Office. “Policy clearly states para troops [sic] are to be provided by the Army - presumably the provision of some 5,000 bodies will not be very difficult and they ought to be forthcoming in a reasonably short time”. The Air Ministry undertook to design and provide parachutes and accessories, including ground training “contraptions” and “launching tackle” for equipment dropped separately.

The Air Ministry was also to be responsible for the provision of “paracraft”. As the “...size and performance of training paracraft need not compare with operational paracraft”, it was suggested training and civilian aircraft, such as the Avro Anson, Airspeed Oxford and DeHavilland 86 and 89 types be assessed for suitability as a short-term measure. This would allow consideration of the “very delicate question of where the operational paracraft are to come from”. It was also felt that provision of a dedicated transport aircraft would place additional strain on aircraft production, which was not considered to be in the national interest. As an alternative, it was suggested that bomber aircraft be used, with the proviso that modification did not keep them out of operations, or

interfere with normal bombing duties. If this was possible, then there was no reason not to allow temporary diversion of bombers:

“...as acceptable at the time. This last point is important and may be the possible cause of differences of opinion between the War Office and Air Ministry. Though we do not wish to be obstructionist it is a point on which a definite understanding must be reached at the outset. Moreover, in the event of a difference of opinion arising at any time, a proper procedure for appealing to the Chiefs of Staff Sub-Committee should be agreed on”.

The conference then recommended that an experimental parachute unit be established as quickly as possible, located in Canada or South Africa on the grounds of space and reducing enemy interference. The German model was recommended as a training template, with alterations to provide a British “slant”. Proceedings then moved off at a tangent. A list of vague operational measures was discussed despite the fact that they fell outside the Air Ministry’s self-delineated area of responsibility. These included the unexplained provision of armour for parachute troops, along with portable flame throwers, anti-tank scatter bomb throwers and portable bikes with small mortars. The conference closed on a rather upbeat and Churchillian note, given the overall tone of the meeting:

“However fantastic an idea may seem at first let us not discard without due thought and ad hoc [original emphasis] research and trial. We laughed at the whole idea of parachute troops until recently and now the enemy has made us divert much of our energy to guard against the threat. If he never uses them against this country he has nevertheless gained something by the threat.”

These internal documents clearly reveal that the Air Ministry's immediate reaction to Churchill's parachute directive was unenthusiastic, if not downright hostile. It was seen as an irrelevant and unwarranted waste of resources, which posed a threat to the RAF's self-appointed mission of strategic bombing. The Air Ministry therefore did not intend to provide any more than the absolute minimum of co-operation in the matter, and not even that if possible. This is clear from the unilateral intent to reduce the parachute force to a fifth or even a tenth of its projected size, and the emphatic insistence that the War Office provide the necessary “bodies” whilst the RAF take responsibility for transport and training expertise as a matter of “policy”. All this was decided without reference to the War Office. It is also implicit that co-operation regarding the parachute force was a very low priority, and very much a long-term, as-and-when resources become available affair. This was somewhat at variance with Churchill’s requirement, and in marked contrast to the War Office's reaction to the equally inconvenient directive to create a raiding force.

However, there was no hint of this in the conference conclusions, which also appeared on 10 June 1940. This document was a model of co-operation, which toned down or even omitted altogether some of the more contentious elements in the 8 June 1940 note and the conference minutes. Presumably this was because the conclusions were intended for external distribution.¹⁰³ The conclusions pointed out, not unreasonably, that it was currently not possible to drop five thousand parachutists at once, and that the ability to do so was limited by the availability of suitable aircraft. This was likely to limit drops to seven or eight hundred men at a time. Because aircraft and aircrew shortages precluded the formation of special transport units, parachute dropping would have to be an alternative role for bombers. Of these, the Armstrong Whitworth Whitley was deemed the “only” suitable type, although it was not explained how this was ascertained. Each Whitley was considered to be capable of carrying between ten and twelve parachutists and 1,000 lb. of additional equipment, and would have to be modified with a sliding door, similar to that of the German Junkers 52. Dropping by night was considered preferable, and it was noted that the aircrew involved would need additional training for their new role.

The matter of parachutes was then examined. The RAF's aircrew parachute was too small for the task, but the training model was considered suitable because it had a larger diameter canopy, which would allow it to support greater weights. The training parachute would still require modification for static line operation, however, to allow jumping from the recommended height of five hundred feet. It was also currently out of production, but a production rate of one hundred units per week was claimed to be attainable, given three weeks notice. As the necessary ground and air personnel were available, it was recommended that a separate PTC should be set up immediately. The commander of the RAF's Parachute Development Flight (PDF) at Henlow was nominated for command. The aircraft establishment of the PTC was to be twenty-one Whitleys, to allow two hundred drops per day and the provision of a Whitley fuselage and other apparatus for ground, or synthetic, training was suggested. No recommendation as to the location of the PTC was made, although it was felt preferable to locate it on an airfield with parachute packing facilities, and as close as feasible to the trainees' barracks. Failing this, it was suggested that parachute packing and synthetic training facilities also be provided at the barracks to maximise training time. The intention was to train the parachutists to pack and retain their own parachutes as a confidence building measure, and it was also felt advisable to have at least one Army officer attached to the PTC, to advise upon and develop special items of clothing, weapons and equipment. There was also a passing reference to exploring the problems posed by towing large gliders, and to investigate an unattributed claim that “large

numbers of qualified glider pilots were serving in the Army". The Air Ministry was to return to this contention.

The document closed with a request to proceed with a list of recommendations. These included approaching the General Staff, establishing a PTC as soon as possible, selecting six Whitley aircraft for parachuting modifications, and ordering ten thousand training type parachutes. A further list of instructions was also appended for the Air Ministry's Director of Research (DoR) who, as well as carrying out makeshift parachuting modifications on the six Whitleys, was charged with investigating the possibility of modifying new Whitleys on the production line, and examining the so-called glider problem.

This then was the Air Ministry's public reaction to Churchill's directive to raise a parachute force, but its tone of co-operative sincerity contrasts starkly with the negative sentiments and vehement objections in the preceding internal documents. There was no overt criticism of the parachute concept, nor mention of reducing the size of the projected parachute force, nor suggestion of locating the PTC overseas, nor references to sidelining the project until resources were more plentiful at some unspecified point in the future. Of course, it is possible that this dichotomy resulted from a further round of un-minuted discussion, although the high level of the 10 June 1940 meeting and the time scale make this rather unlikely. It is therefore logical to assume that the internal documents reflect the true Air Ministry attitude to the matter, and that the conference conclusions were a bureaucratic gambit to project an illusion of compliance. Only time, and the subsequent behaviour of the Air Ministry, would prove the case one way or the other.

V. The Beginnings of a Training and Development Infrastructure: The Establishment of the Central Landing School

Whatever its true opinion of the matter, the Air Ministry made a rapid start on implementing the recommendations of the 10 June 1940 conference. On 14 June 1940, the Air Ministry Departments of Plans and Operations issued a joint executive memo entitled "Parachute Training Centre", which set the establishment of a PTC in motion.¹⁰⁴ It ordered the framing of a paper establishment, the selection and modification of six Whitleys, and requested that the Air Ministry's Director of Military Co-operation (DMC) find out where the Army intended to establish its own "Parachute Force Centre" and propose a suitable RAF location in the vicinity. Other departments were ordered to ascertain the number of suitable parachutes available, whether this was sufficient to allow training to commence immediately, and to propose a date for the official establishment of the PTC in the light of

all this. On 17 June 1940 a Secret Organisation Memo informed individual RAF Commands of the Air Ministry's decision:

- “1. The Parachute Training Centre will form at [RAF] Ringway on 21th [sic] June 1940
2. It will form to Establishment No. WAR/AC/102 and will be placed in No. 22 Group for administration
3. It will be under the operational control of the Director of Plans, Air Ministry
4. The aircraft establishment will be 4 + 2 Whitleys.”¹⁰⁵

A “Table of War Establishment for Parachute Training Centre” was attached to the memo.¹⁰⁶ Six RAF officers, under the command of Squadron-Leader D. R. Shore, and sixty-six RAF other ranks were to be posted to the PTC. This appears to have been considered insufficient, given that a marginal note on the document requested additional “instructional staff of 4 sergeants and 4 corporals”. This was refused.¹⁰⁷ The new establishment was renamed the Central Landing School (CLS), presumably to reflect the Air Ministry's expressed interest in military gliding.¹⁰⁸ This change in nomenclature was to cause some confusion. At least one official communication to Ringway was addressed “Central Laundering Service”, and the War Office re-directed a letter to an Army parachute trainee addressed to the “Central Sunday School”. This caused no little amusement at the CLS, which at one point rendered its telegraph address as “Droppings, Ringway”.¹⁰⁹

The CLS was thus established on paper with effect from 21 June 1940, although the matter was not as straightforward as that. Personnel assigned to the CLS began to arrive at RAF Ringway from that date, but the designated commander, Squadron-Leader Shore, had broken his leg in a parachute jump at the PDF, and was consequently unable to meet and enlighten his new charges.¹¹⁰ By 24 June these included at least six RAF pilots, and possibly Captain J. F. Rock RE, the War Office's representative in the new venture, who arrived between 24 and 27 June.¹¹¹ Neither the new arrivals nor the existing station staff had any inkling of what they were supposed to be doing. This situation prevailed until the senior pilot by experience rather than rank, Pilot-Officer Louis Strange DSO, MC, DFC and Bar, borrowed an aircraft on his own initiative and flew to London to clarify matters on 28 June. There he learned of Squadron-Leader Shore's mishap and, thanks to an old friend serving as the Deputy Director of Combined Operations (Air), was despatched back

to Ringway as the CLS's new commander with the rank of Squadron-Leader, a status officially confirmed by No. 22 Group on 1 July 1940.¹¹²

Strange had earned his DSO, MC, DFC, three Mentions in Despatches and the rank of Lieutenant-Colonel during the First World War. He joined the RFC before 1914, and his war service was eventful to say the least. On one occasion, for example, attempts to clear a jammed Lewis gun mounted on his Martinsyde aircraft's upper wing during a dog-fight ended with him hanging by the fingertips from the Lewis drum, after the aircraft inverted and his seat belt snapped. Somehow, he managed to regain control of the aircraft and return safely to base. Recalled as a RAF reservist in December 1939 with the rank of Acting Pilot Officer, he served with the RAF's only dedicated transport unit, No. 24 Squadron, ferrying equipment and personnel to France. In the process he won the Bar to his DFC, by successfully flying an unarmed Hawker Hurricane fighter back to the UK in the latter stages of the Dunkirk evacuation. Strange was chased by at least six German fighters, which he avoided with a death-defying display of low-level flying. This was all the more extraordinary because Strange had no previous experience with the Hurricane, or indeed any high-performance fighter aircraft. Nonetheless, with the aid of friendly anti-aircraft fire off Dunkirk, he succeeded in delivering his aircraft, which by that time resembled a flying colander, to RAF Manston in Kent.

Strange was presumably posted to Ringway as a result of his transport service with No. 24 Squadron, and his elevation to command the CLS was thus whimsical to say the least. It did, however, prove to be a very happy development for the new parachute venture, for Strange was an extremely capable military maverick with a long-standing habit of bending or ignoring rules and regulations when they interfered with the business in hand. His attitude is well summed-up by his alleged response to an Air Ministry accusation that he had no respect for procedure: "I have if it proceeds".¹¹³ Under ordinary circumstances such an attitude could be a liability, but it was exactly what was called for in the extraordinary circumstances of June 1940, however. Thus Strange, like Churchill, proved to be another right man in the right place at the right time for the establishment of a British airborne force, and he rapidly imposed order upon the uncertainty at Ringway in his own inimitable style.

One of the most crucial problems facing Strange was the matter of parachutes, without which a parachute training establishment was redundant. Air Ministry estimates of parachute availability and production proved to be rather optimistic. An internal Air Ministry minute on 20 June 1940 claimed there was only eleven serviceable and three

repairable training parachutes available in the UK. Although an order had been placed for a further 10,000, and 10,000 observer-type harnesses, training parachute packs were not compatible with that type of harness without modification. The target was therefore considered achievable within two months if all other parachute production ceased, or five months if it did not. To complicate matters further, the first option was likely to affect flying training in the Dominions under the Empire Training Scheme, and there was an unexplained bottleneck in production of harness buckles and quick release mechanisms. The minute ended, unsurprisingly, with a request for clarification from higher authority.¹¹⁴

Strange tackled the problem by visiting the PDF on 29 June 1940 and appropriating its entire stock of Irvin training parachutes, including some modified for static-line jumping as a result of Squadron-Leader Shore's brief visit. Whilst at the PDF, Strange also attempted to rectify the shortage of parachute instructors, by the simple expedient of addressing the PDF's staff (with the station commander's blessing) and calling for volunteers. Ten came forward, and the remaining shortfall was made up by drafting in Army Physical Training Instructors (PTIs), the first six of which arrived at Ringway on 1 July 1940 and commenced ground training for their new role the next day.¹¹⁵ Other personnel posted to the CLS appeared in dribs and drabs, and by 4 July there were sufficient commissioned officers to allow Strange to delineate responsibilities and begin drawing up a preliminary training syllabus.¹¹⁶ By 8 July the CLS had a staff of eleven. Besides Strange as OC and a hastily promoted Major Rock (to match Strange's elevation to Squadron-Leader) as the ranking War Office representative,¹¹⁷ the CLS boasted an Adjutant, an Intelligence Officer, a Chief Flying Instructor and three pilots, a Chief and Assistant Chief Landing Instructor and a Chief PT Instructor. This proved sufficient for the CLS to begin work.¹¹⁸

Besides parachutes and personnel, there remained the matter of aircraft. Some of the six assigned Whitleys arrived at Ringway before 5 July 1940. According to CLS operational records, all assigned pilots who were not qualified on the Whitley received their qualification in-house by that date.¹¹⁹ It would also appear that these aircraft had not been modified for parachute jumping with the addition of a side-door, as recommended by the Air Ministry conference of 10 June 1940. According to Peter Hearn, the PDF had modified a single Whitley on its own initiative, again as a result of Squadron-Leader Shore's brief and ill-fated visit, but not with a side-door. Instead, the rear gun-turret had been removed and replaced with a small platform to allow "pull-off" jumps, and the ventral "dustbin" gun position removed to create an alternative exit in the floor of the aircraft.¹²⁰ The former method was the rather hair-raising standard RAF training technique at that time, which required the trainee to pull the rip-cord on his parachute and let the

developing canopy yank him from his perch, usually on the lower wing of a biplane.¹²¹ The hole in the floor, or aperture, was a new method, which was successfully tested by Strange's ten PDF volunteers on 30 June 1940. Hearn also claims that Strange subsequently accompanied four Whitleys assigned to the CLS to the Armstrong Whitworth factory to be similarly modified on his own initiative.¹²² Although no date is given for this, it presumably occurred between 30 June and 9 July, given that CLS operational records show that dropping sandbag dummy parachutists for pilot experience commenced on the latter date.¹²³

The PDF's *ad hoc* floor aperture modification became the norm for parachute-assigned Whitleys. An Air Ministry progress report produced for Churchill and the Chiefs of Staff in August 1940 claimed that the “door in the side of the Whitley fuselage was examined but found to be too small”. Enlarging the door, it was claimed, risked compromising the structural integrity of the aircraft.¹²⁴ However, at least one drop, and an operational one at that, was carried out by a Whitley with a side-door of some description, although it is unclear whether this was the existing door for crew access on the aircraft's port side, or a modification or re-location thereof. According to Jozef Garlinski, the first Polish Special Operations Executive (SOE) operatives were delivered to Poland on the night of 15-16 February 1941 in a Whitley modified in this way. The three operatives involved complained at the time that they had been trained to jump from a “trapdoor” in the floor rather than a side-door, although the jump went off without mishap.¹²⁵

Assuming that the Polish account is accurate, this is a curious anomaly that directly contradicts the Air Ministry's stated verdict. It is logical to assume that the aircraft involved had been modified, for it is inconceivable that staff at the PDF or CLS could have failed to check the Whitley's existing crew access door for suitability. The aircraft in question could have been assigned to the CLS, and there could have been others, but if that were the case it would be reasonable to expect some mention of them in operational records, other official documentation or participant accounts. This does not appear to be the case, and it is highly unlikely that the existence of a successfully modified aircraft would have gone unremarked, for the suitability of the Whitley for parachuting was shortly to become a matter of serious dispute between the Air Ministry and War Office.

Why the aircraft was not assigned to the CLS for its intended role is therefore a mystery. Possibly it became misdirected within the RAF's equipment administration system, or it may simply be that the modifications carried out by the PDF were considered superior by some nameless RAF official, resulting in the aircraft being considered surplus to CLS

requirements and issued elsewhere. On the other hand, given the schizophrenic nature of the Air Ministry's reaction to Churchill's parachute directive, it is not impossible that the officially modified aircraft was considered rather too well suited to its projected task, and was deliberately "lost" to the CLS. Such a suggestion may appear rather far-fetched, but it is in perfect accord with the sentiments expressed in the Air Ministry's Department of Plans paper of 8 June 1940 and the minutes of the resulting conference on 10 June. If this was the case, it was of course upset by Strange's presumably unforeseen unilateral and highly irregular action, which ensured that the CLS had at least one Whitley capable of dropping parachutists within days of its official establishment.

Facilities were a further problem for the CLS. The new establishment had been located at RAF Ringway, formerly Manchester Airport, because it was isolated from other RAF operational areas,¹²⁶ but as a fully-functioning RAF station Ringway was unsuitable for regular and large-scale parachute descents. Strange was thus faced with the problem of locating a suitable parachute landing zone, a task he achieved with his customary directness and speed. Operational records show that the search began on 6 July 1940,¹²⁷ and Tatton Hall Park, a large area of parkland located five miles southwest of Ringway recommended itself immediately. Permission for aerial photography of the Park was requested,¹²⁸ whilst Strange approached the owner, Lord Egerton, in person. Lord Egerton's son had been a pioneer aviator of Strange's acquaintance before the First World War, and Strange gained permission to use the Park as a parachute landing ground.¹²⁹ A request for official permission to use Tatton Hall Park as a "permanent landing area for [parachute] trainees but not aircraft" was sent to the Air Ministry on 7 July 1940. It was accompanied by the relevant map sheet and grid references, a request that other flying activities be curtailed within a two-mile radius of the centre of the Park, and confirmation that the owner of the property had given his permission.¹³⁰ The Air Ministry granted authorisation on 8 July 1940, with the proviso that owner agreement was confirmed, and that there was no cost to the Air Ministry.¹³¹ A further communication halted the obstruction of the Park as part of the local programme of anti-invasion measures.¹³²

This, however, was far from the end of the matter. Someone, from either No. 22 Group or the CLS, suggested establishing a landing ground at Tatton for powered aircraft.¹³³ The idea first arose toward the end of July 1940, when Lord Egerton wrote to the Vice Secretary of State for Air enquiring about compensation for the loss of grazing land that this would entail.¹³⁴ As that position did not exist, the letter was presumably intended for the Under Secretary of State for Air, Captain Harold Harrington-Balfour.¹³⁵ Given Lord

Egerton's less than perfect grasp of the British higher planning and command structure, it might be advisable at this point to provide a brief sketch of that structure.

The British government reacted far more swiftly to the outbreak of the Second World War than it had in 1914. The peace-time Committee for Imperial Defence was suspended and absorbed, along with its Cabinet Committees and Sub-Committees, into a nine-strong War Cabinet on 5 September 1939. This included Prime Minister Chamberlain, the Home Secretary Lord Halifax, the Minister of Food, the Minister of Labour and National Service, the heads of the three service Ministries (Sir Dudley Pound, Leslie Hore Belisha and Sir Kingsley Wood), the First Lord of the Admiralty (Churchill) and a Minister Without Portfolio (Lord Hankey).¹³⁶ In April 1940 Chamberlain made Churchill head of a new Ministerial Committee on Military Co-ordination, consisting of the three service Ministers, the Chiefs of Staff Committee (consisting of the Chiefs of the three services), and representatives from the Foreign Office and the Treasury.¹³⁷

The following month, on 10 May 1940, Churchill became Prime Minister of a National Government and carried out his own adjustments to the defence machinery. In effect, the Ministerial Committee on Military Co-ordination became Churchill's Defence Committee, with the Prime Minister absorbing the office of Minister of Defence. The Chiefs of Staff Committee thus became the supreme executive arm within the Defence Committee through which Churchill prosecuted the war. The pre-existing Cabinet Secretariat's Military Wing was transformed into the Office of the Minister of Defence to act as a "handling machine" within the War Cabinet Office. The latter was run by Major-General Sir Hastings Ismay, who simultaneously served as Churchill's Personal Staff Officer, with a seat on the Chiefs of Staff Committee. In addition, there were two permanent sub-committees attached to the Defence Committee, the Defence Committee (Operations) and the Defence Committee (Supply), whose responsibilities were self-evident. This was the permanent structure under which the British airborne force was established, with additional sub-committees being created on an *ad hoc* basis to deal with specific matters.¹³⁸

In the event, the scheme to establish an aircraft landing ground at Tatton Park was only finally abandoned in January 1941, after a ludicrously long-winded process which involved Lord Egerton and his estate staff, the Air Ministry, the CLS, No. 22 Group, several Air Ministry Works departments, GHQ Home Forces, and the Cheshire War Agriculture Executive Committee.¹³⁹ The up side of this sorry saga was the fact that it did not interfere with the use of the Park as a parachute landing zone, and the first drop, using sandbag dummies, took place there on 11 July 1940.¹⁴⁰ It was not the perfect location, for it

contained several bodies of water that came to be viewed with some trepidation by trainees, and which inspired some wag on the training staff to pen a tongue-in-cheek ditty entitled "Mind the Lake" to the tune of "Bless 'em All".¹⁴¹ They were later used to train SOE operatives in water jumping techniques.¹⁴²

The CLS thus had access to an adequate parachute landing ground from 8 July 1940, but the ground facilities at Ringway had still to be sorted out. On 15 July 1940, for example, the CLS had to seek permission to use the station's Airmen's Dining Room for parachute packing between 18:00 and 22:00 hours. Many of the RAF non-commissioned personnel were billeted a mile or more from Ringway, the Army PTIs were housed, rather appropriately, in the station's gymnasium,¹⁴³ and the unit rapidly outgrew the two hangars it was allocated for training, maintenance and storage purposes.¹⁴⁴ Nonetheless, the fact remains that in a matter of ten days the CLS had been converted from a leaderless collection of individuals into a unit with access to sufficient equipment and facilities at least to begin carrying out its allotted task of training military parachutists.

The problems of equipment and facilities were overtaken to some extent by the arrival of the first parachute volunteers from No. 2 Commando, who began to arrive in nearby Knutsford from 3 July 1940.¹⁴⁵ The unit's OC, Lieutenant-Colonel Jackson RTR, and B and C Troops of No. 2 Commando commenced ground training and air experience flights at the CLS from 9 July, whilst modification and testing work continued.¹⁴⁶ Inclement weather delayed matters, a circumstance which was to become familiar, given Manchester's reputation for having the vilest climate in England.¹⁴⁷ Nonetheless, the first dummy drops using sandbags occurred at Tatton Park on 11 July 1940,¹⁴⁸ and the first live drop there, by members of the CLS staff, followed on 13 July. This was supposed to be a secret, but according to Strange "...the whole of Manchester turned out to see our first jumps".¹⁴⁹ They consisted of eight descents from a Whitley, two pull-offs and six from the aperture, and included Strange himself, making his first parachute descent. The first exit from the aperture employed a rip-cord operated Irvin training parachute, and the remaining five apparently used the same parachute modified for static-line operation.¹⁵⁰ A further fourteen descents were carried out the following day. Six Army personnel, including Major Rock, used the tried if hair-raising pull-off method, whilst RAF instructors carried out a further six test jumps through the aperture. The first Army descents from the aperture were carried out by selected PTIs without mishap on 15 July.¹⁵¹ The next day Air Marshal Sir William Mitchell inspected the CLS. A demonstration of ground training was laid on, and the staff felt sufficiently confident of their expertise and equipment to carry out a live parachuting demonstration. Eight RAF and six Army instructors jumped for the

benefit of their visitor and the assembled Commando trainees, although the fact that one of the RAF instructors injured himself on landing must have reduced the PR and confidence-building value of the exercise.¹⁵²

Thus, after twenty-one days, the CLS was ready to begin training military parachutists, an achievement that compared favourably with the Army's performance in locating and assembling the necessary volunteers. It should be noted, however, that progress on the RAF side was almost entirely due to the unorthodox and unauthorised efforts of Squadron-Leader Strange who, virtually single-handed, secured the necessary personnel, equipment and facilities in the eleven days after he assumed command of the CLS. Given that such progress would have taken infinitely longer through conventional channels, and the less than urgent treatment of the matter by those channels, one has to wonder whether the Air Ministry really envisaged, or even welcomed, such spectacular progress. Indeed, it is not beyond the bounds of possibility that Strange's single-minded approach upset a subtle scheme to slow and thus minimise RAF compliance with red tape, camouflaged behind a show of acceptance.

There is insufficient solid evidence at this stage of the British airborne story conclusively to prove such a suggestion. What is apparent, however, is a marked dichotomy of effort and support between the Air Ministry and War Office for the new parachute venture, despite the fact that both agencies purported to be fully committed to it. Admittedly, the War Office did reduce the initial parachute commitment to five hundred rather than ten times that number, and unilaterally combined the parachute effort within the larger Commando raiding organisation for administrative convenience. However, the former decision was based in part on the lack of RAF training facilities, and the fact remains that, once the decision to raise a parachute force was taken, the War Office swiftly disseminated the policy in a manner which brooked no argument. It also rapidly assembled the necessary administrative machinery, and invested it with sufficient authority for enforcement, with additional support from the very highest level if necessary. AG 17 wasted no time before invoking the authority of the CIGS when faced with objections or obstructionism, real or assumed.¹⁵³

Contrast this with the lack of information and guidance which greeted those posted to the CLS at Ringway, and the difficulty Strange encountered in obtaining information on his new posting during his impromptu visit to London on 28 June 1940. No-one at the Air Ministry claimed to know anything about a parachute unit, and Strange was obliged to use his initiative to track the matter to Combined Operations headquarters (located at the

Admiralty) to attain enlightenment and, as it turned out, promotion.¹⁵⁴ This does not suggest a venture enjoying high support, an impression reinforced by the refusal of the Air Ministry to provide the CLS with a mere eight additional NCOs. There is also the fact that some pilots posted to the CLS were not qualified to fly the Whitley, despite the Air Ministry's insistence that the Whitley was the only available aircraft suitable for parachuting. There was also the matter of the non-appearance of the Whitleys modified with side-doors.

Of course, all this could have been coincidental, the result of administrative errors, incompetence, or the pressure of circumstances, although similar constraints do not appear to have interfered with the ability of the War Office to accomplish their much larger side of the parachute bargain. Thus, the fact that both agencies were commendably swift in issuing the necessary orders is not in itself indicative of support for the new venture. The War Office took the trouble to ensure that its instructions were fully and promptly obeyed, whereas the Air Ministry was content to sit back and allow official procedure to follow its course. This, in conjunction with the tone of internal Air Ministry discussion on the subject, makes it reasonable to conclude that the Air Ministry was at best indifferent, and at worst actively opposed to the establishment of a dedicated British parachute force. Subsequent events would prove the accuracy or otherwise of this conclusion.

Notes

¹ PRO MI(R) File 3, paper dated 5 June 1939; cited in M. R. D. Foot, *SOE in France*, p. 2

² Foot, p. 3

³ *ibid.*, pp. 4-5

⁴ *ibid.*, p. 6

⁵ for a brief account, see *Messenger (The Commandos)*, *op. cit.*, pp. 19-25

⁶ see Massam, *op. cit.*, especially Chaps. 1 & 2

⁷ see *ibid.*, pp. 124-135

⁸ *ibid.*, pp. 140-147

⁹ *ibid.*, pp. 150-151

¹⁰ for details of the French trial unit, see "Notes of the Week", *The United Services Review*, Vol. LXXVII (10 December 1936), p. 1

-
- ¹¹ see for example PRO AIR 2/3897, doc 1A, Report "Formation of Parachute Troops in Germany", from Air Attaché Berlin to AM
- ¹² "Fighting in Rotterdam", *The Times*, Saturday 11 May 1940, p. 6
- ¹³ "Parachutists In British Uniforms", *The Times*, Saturday 11 May 1940, p. 6
- ¹⁴ Editorial "Parachutists", *The Times*, Saturday 11 May 1940, p. 7
- ¹⁵ "Parachute Attacks Mastered", *The Times*, Tuesday 14 May 1940, p. 6
- ¹⁶ quoted from "The Parachute Invasion: German Techniques Described - Lessons from Holland", *The Times*, Tuesday 21 May 1940, p. 5
- ¹⁷ Miksche, op cit., p. 25
- ¹⁸ "Local Defence Volunteers - Guarding Against Parachutists: Mr Eden's Appeal", *The Times*, Wednesday 15 May 1940, p. 3; see also S. P. Mackenzie, *The Home Guard*, pp. 33-34
- ¹⁹ *Parl. Deb. 5th Series, CCCLXI*, p. 750, 4 June 1940
- ²⁰ PRO WO 193/27, doc. 1A, minute with appended Commons Notice 1939/40 - 1439, Question for Tuesday 4/6/40 by Mr Cocks, "Organisation of Corps of Parachutists and Gliders", n.d., c.03/06/1940; and doc. 2A, minute with appended reply in full, n.d., c.03/06/1940
- ²¹ *ibid.*, doc. 2B, minute "Creation of a Parachute Corps", from General Staff MO1 to MO7, dated 04/06/1940
- ²² PRO CAB 120/414, minute from PM to Ismay, dated 05/06/1940
- ²³ Churchill's 1917 paper is reproduced in full Blunt, op cit., pp. 163-169
- ²⁴ PRO CAB 120/10, Directive from PM to War Cabinet CoS Committee, dated 18/06/1940
- ²⁵ see for example Otway, op. cit., p. 21
- ²⁶ see Chapter Two above
- ²⁷ see for example PRO AIR 2/3897, "1938 - Formation of Parachute Troops in Germany: Report from British Air Attaché, Berlin", dated 30/08/1938; and PRO WO 190/811, "1939, May 19: Notes on Parachute Units in German Defence Forces", report from M. I. 3b, dated 19/05/1939
- ²⁸ see "Parachute Troops Technique: How the Germans are Trained", *The Times*, Wednesday 15 May 1940, p. 6
- ²⁹ the figure of 1600 is cited in MacDonald, op cit., p. 37; see also the photograph captioned "German Parachutists: German prisoners on arrival at a British port. They include a number of parachute troops who were captured with their special equipment in Holland", in *The Times*, Monday 20 May 1940, p. 8. Despite the caption, the prisoners all appear to be wearing *Heer* uniform, and were presumably members of 22 *Luftlande* Division. However, another photograph of a group of *Fallschirmjager* appeared in a later edition of the paper, allegedly developed from a camera taken from one of the group, which clearly showed distinctive items of German paratroop uniform and personal equipment; see *The Times*, Friday 21 June 1940, p. 8
- ³⁰ see PRO AIR 2/7239, doc. 3A, note entitled "Parachute Troops" from AM Director of Intelligence, dated 10/06/1940
- ³¹ *The Times*, Saturday 8 June 1940, p. 3; what appear to be the four-view originals for this illustration, printed on high-quality card, are filed in PRO WO 32/4723
- ³² see for example PRO WO 193/697, minute from Balfour Davey to MI 3, dated 26/09/1939; and PRO WO 190/879, appendix "A", minute from MI 3, dated 01/11/1939

³³ Foot, pp. 2-3

³⁴ PRO AIR 32/2, doc. 1A, paper from Major John Rock RE, n.d., c. July/August 1940

³⁵ *ibid.*, doc. 1, "Airborne Brigade Group", n.d., c. August 1940; and doc. 14, paper "Airborne Troops - Policy For", from War Office SD4 to Director Military Co-operation, Air Ministry, dated 10/01/1941

³⁶ for example, a film, entitled "Britain's Paratroops" made by the Gaumont British Film Company, was released on 24 October 1941, and British Airborne troops appear in a very high proportion of official wartime photography; for film details, see Maurice Newnham *Prelude to Glory*, pp. 75-78, for still photography, note for example the number of photographs which feature airborne troops in Davis, *op cit.*

³⁷ quoted from the introductory frames of the film

³⁸ James D. Ladd, *Commandos and Rangers of World War II*, p. 17.

³⁹ the reference to the 6 June meeting comes from Messenger, and that to approval being granted on 8 June from Ladd. Messenger implies that Clarke's note was not considered until 10 June 1940, when Dill replaced Ironside as CIGS, and that the 9 June call for Volunteers for Special Service originated independently. However, Clarke's note suggested the name Commando, and that term appears twice in the 9 June letter, which would suggest that the latter was drafted with knowledge of the former. Ladd's account would therefore appear to be the more accurate: see Ladd, p. 17; and Messenger (*The Commandos*), p. 26

⁴⁰ Ladd, p. 17

⁴¹ PRO WO 32/4723, doc. 1B, dated 09/06/1940

⁴² all quotes from PRO WO 32/4723, doc. 1B

⁴³ PRO WO 32/4723, doc. 11A, memo from WO DMO&P to WO DRO, dated 12/06/1940

⁴⁴ *ibid.*, doc. 18A, memo from WO DMO&P, dated 13/06/1940; the memo also appears in PRO WO 193/384, doc. 3A, same date

⁴⁵ quoted from PRO WO 32/4723, doc. 18A; the memo is reproduced in full in Messenger (*The Commandos*), pp. 28-29

⁴⁶ PRO WO 193/384, doc. 1A, signal from WO DMO&P, dated 20/06/1940

⁴⁷ PRO WO 32/4723, doc. 14A, copy of letter from WO DRO to All Home Commands, dated 17/06/1940, and doc. 15A, telegram from WO DRO to All Home Commands, also dated 17/06/1940; for copies of individually addressed telegrams see docs. 1 - 10 & 13

⁴⁸ *ibid.*, doc. 11A, typed addendum dated 17/06/1940; 3rd Division was commanded by future Field Marshal Montgomery, had performed well on the Continent, and had been evacuated to the UK in relatively good order. It was earmarked for invasion defence

⁴⁹ this idea was subsequently abandoned, and No. 1 Commando was disbanded and the personnel gathered returned to their original Independent Companies; these were later incorporated into 1 & 2 Special Service Battalions when the raiding forces were re-organised in October 1940. No. 1 Commando was reconstituted with fresh volunteers and served in Europe, North Africa and Burma from September 1941; for disbandment details see PRO WO 32/4723, doc. 36A, letter from WO DRO to All Home Commands, dated 14/07/1940, and doc. 45A, telegram from WO DRO to Salisbury Commandeth, dated 25/07/1940; for the re-organisation of raiding forces, see Messenger (*The Commandos*), p. 40; for details of No. 1 Commandos subsequent career, see Ladd, p. 254

⁵⁰ PRO WO 32/4723, doc. 7A, conference minutes "Record of Meeting Held at 12.00, 20 June 1940 to Consider Organisation of Irregular Forces", dated 21/06/1940

⁵¹ *ibid.*, doc. 19C, memo "Formation of Irregular Commandos" from WO DSD to All Home Commands, n.d., c.20/06/1940

⁵² *ibid.*, doc. 19B, telegram from GOC Southern Command to Forcibly Seventeen, dated 23/06/1940

-
- ⁵³ in the event, being RTU'd came to be considered as something of a disgrace in Commando and Airborne units, and was wielded by authority as the supreme sanction for individual transgressions
- ⁵⁴ PRO WO 32/4723, doc. 19A, memo from WO DRO to All Home Commands, dated 26/06/1940
- ⁵⁵ from 15 October 1940 the rate was reduced to ten shillings per day for officers and four shillings per day for other ranks for the first seven days of leave or illness, after which the special allowance ceased until the individual returned to duty; see PRO WO 32/4723, doc. 91A, memo to All Home Commands and Pay Offices, dated 15/10/1940
- ⁵⁶ *ibid.*, doc. 1A, telegram from Commandeth Chester to WO SD1, dated 29/06/1940; and doc. 2A, telegram from WO SD1 to Commandeth Chester, dated 02/07/1940
- ⁵⁷ *ibid.*, doc. 29A, letter from WO DRO to All Home Commands, dated 03/07/1940
- ⁵⁸ *ibid.*, docs. 38 - 44, various dates
- ⁵⁹ *ibid.*, docs. 4, 5, 6, & 7, letters from Ministry of Food to WO, dated 01, 02, & 05/04/1941 respectively, and doc. 109A, memo from WO DMO&P to Commander Special Service Brigade, dated 15/04/1941
- ⁶⁰ *ibid.*, doc. 19A, memo from WO DRO to All Home Commands, dated 26/06/1940
- ⁶¹ quoted from PRO CAB 120/262, letter from Lieutenant-Colonel Jacob RA to Lieutenant-Colonel Hornby MC, dated 14/08/1940
- ⁶² see for example Richard Gale, *Call To Arms*, p. 117. Gale is referring specifically to the later Army reaction to the expansion of airborne forces, but the point made is equally valid for the earlier Commando establishment
- ⁶³ Montgomery's 3rd Infantry Division was initially considered, due to its good performance in France; see *Messenger (The Commandos)*, p. 26
- ⁶⁴ for details and brief participant accounts from such interviews, see *Messenger (The Commandos)*, pp. 30-31
- ⁶⁵ the exceptions were No. 10 Commando, which was temporarily shelved when Northern Command were unable to locate sufficient suitable volunteers, and No. 12 Commando, raised in Northern Ireland, where only two hundred and fifty suitable volunteers were found; see *Messenger (The Commandos)*, p. 30
- ⁶⁶ PRO WO 32/4723, doc. 1B, letter from WO DOR to GOCs, Northern and Southern Commands, dated 09/06/1940
- ⁶⁷ *ibid.*, doc. 49A, letter from GOC Northern Command to the WO, dated 28/07/1940
- ⁶⁸ PRO CAB 120/262, doc. 7, conference minutes "Meeting of the War Cabinet Chiefs of Staff Committee, 6 August 1940", dated 06/08/1940
- ⁶⁹ PRO WO 32/4723, doc. 84, signal from GOC Southern Command to WO AG 17, n.d., c.3/10/1940
- ⁷⁰ *ibid.*, doc. 87A, telegram from HQ Western Command to WO AG 17, dated 06/10/1940
- ⁷¹ *ibid.*, doc. 96A, telegram from WO AG 17 to Eastern Command, dated 22/10/1940
- ⁷² *ibid.*, doc. 64A, letter from WO SD4 to All Home Commands, dated 22/08/1940.
- ⁷³ *Messenger (The Commandos)*, pp. 39-40
- ⁷⁴ PRO WO 32/4723, docs. 73 - 76, various dates between 16/09/1940 and 01/10/1940
- ⁷⁵ *ibid.*, doc. 76A, note from WO DOR to WO AG 17, dated 01/10/1940
- ⁷⁶ *ibid.*, doc. 76B, teleprint from WO AG 17 to HoFor, All Commands, dated 01/10/1940
- ⁷⁷ *ibid.*, doc. 81A, signal from HoFor to All Home Commands, n.d. c.01/10/1940

-
- ⁷⁸ *ibid.*, doc. 82, signal from WO AG 17 to HoFor, dated 04/10/1940; doc. 84, signal from Southern Command to WO AG 17, n.d. c.03/10/1940; doc. 85, message form from WO AG 17 to Southern Command, dated 05/10/1940; and doc. 86A, teletype from HoFor to WO AG 17, n.d. c.05/10/1940
- ⁷⁹ PRO WO 193/27, minute "Creation of a Parachute Corps", from General Staff MO1 to MO7, dated 04/06/1940
- ⁸⁰ *ibid.*, doc. 3A, minute from War Office MO1 to War Office SD1, dated 10/06/1940. Given the timing, "division" is probably meant in its literal sense rather than as a formal military unit.
- ⁸¹ PRO WO 32/4723, doc. 11A, memo from WO DMO&P to WO DRO, dated 12/06/1940
- ⁸² *ibid.*, doc. 15A, telegram from WO DRO to All Home Commands, dated 17/06/1940
- ⁸³ *ibid.*, doc. 7A, conference minutes "Record of Meeting Held 20 June 1940 to Consider Organisation of Irregular Forces", dated 21/06/1940
- ⁸⁴ *ibid.*, doc. 19C, memo "Formation of Irregular Commandos", from WO DSD to All Home Commands, n.d. c.20/06/1940
- ⁸⁵ *ibid.*, doc. 20A, telegram from Southern Command to WO AG 17, dated 26/06/1940
- ⁸⁶ *ibid.*, doc. 27A, memo "Formation of Commando and Irregular Troops", from Southern Command to various units under command, dated 28/06/1940
- ⁸⁷ *ibid.*, doc. 1A, telegram from Commandeth Chester to WO SD1, dated 29/06/1940
- ⁸⁸ PRO AIR 2/4586, doc. 1A, Secret Organisation Memo, "Formation of a Parachute Training Centre", n.d. c.20/06/1940
- ⁸⁹ Otway, p. 31
- ⁹⁰ PRO WO 32/4723, doc. 58A, letter from PTS to WO, dated 07/08/1940
- ⁹¹ PRO AIR 29/512, entry for 09/07/1940
- ⁹² Peter Hearn *Flying Rebel*, p. 114
- ⁹³ PRO WO 32/4723, doc. 37, telegram from WO MO 9 to GOC Belfast, dated 14/07/1940
- ⁹⁴ *ibid.*, doc. 46A, letter from DA & QMG NI to WO and various subordinate units, dated 26/07/1940
- ⁹⁵ *ibid.*, doc. 72A, telegram from Scottish Command to WO AG 17, dated 16/09/1940
- ⁹⁶ *ibid.*, doc. 26A, telegram "Volunteers for Special Service" from WO DRO to All Home Commands, dated 30/06/1940
- ⁹⁷ PRO AIR 2/4586, doc. 6A, letter from AM Deputy Director of Operations, dated 20/06/1940
- ⁹⁸ Otway, p. 32
- ⁹⁹ PRO WO 32/4723, doc. 99A, teletype message from WO AG 17 to All Home Commands, dated 21/10/1940
- ¹⁰⁰ *ibid.*, doc. 103A, telegram from WO AG 17 to Northern Ireland Command, dated 10/11/1940
- ¹⁰¹ PRO AIR 2/7239, doc. 1B, note entitled "Development of Parachute Troops" from AM Department of Plans to various AM departments, dated 08/06/1940
- ¹⁰² *ibid.*, doc. 2A, minutes of conference held at the Air Ministry, dated 10/06/1940
- ¹⁰³ *ibid.*, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions of Conference held at the Air Ministry June 10, 1940", dated 10/06/1940

-
- ¹⁰⁴ *ibid.*, doc. 6A, memo "Parachute Training Centre" from AM Department of Plans and Department of Operations, dated 14/06/1940
- ¹⁰⁵ the Secret Organisation Memo is undated, but follows another document dated 20 June 1940; see PRO AIR 2/4586, doc. 1, AM Form 1455, request to open New File on "Formation of Parachute Training Centre", dated 20/06/1940; and doc. 1A, Secret Organisation Memo, "Formation of a Parachute Training Centre", n.d.
- ¹⁰⁶ *ibid.*, doc. 4A, "Table of War Establishment for Parachute Training Centre", n.d., c. 14-20/06/1940
- ¹⁰⁷ *ibid.*, doc. 5A, signal from Air Ministry to 22 Group, n.d., c. 21/06/1940
- ¹⁰⁸ there does not appear to be any official notification of this change, but the term CLS appears on all documents referring to the airborne unit at Ringway apart from those ordering its initial establishment, and is used for the title of the unit's operational record book, in which entries commence on 1 July 1940; see PRO AIR 29/512, Operational Record Book, Central Landing Establishment
- ¹⁰⁹ Lawrence Wright, *The Wooden Sword*, p. 12; and Saunders, *op cit.*, p. 33. Wright was a RAFVR officer who was closely involved in British combat glider development from October 1940
- ¹¹⁰ for details of Shore's accident see Hearn (*Flying Rebel*), p. 114; and PRO AIR 29/512, Introduction
- ¹¹¹ according to the official Royal Engineers account, Captain Rock arrived at Ringway on 24 June, but Hearn claims that the pilots arrived on that date and that Rock arrived on 27 June. Rock's service record, merely relates that he was assigned to Ringway on 24 June 1940. The disparity could reflect the time-lapse between the War Office formulating the order and it being carried through, and it is possible that Rock was given a breathing space to put his affairs in order prior to reporting to his new assignment; see *The History of the Corps of Royal Engineers* (Chatham: The Institution of Royal Engineers, 1951), Volume VIII, p. 191; and Hearn (*Flying Rebel*), p. 114. I am indebted to Dr John Rhodes, Curator of the Royal Engineers Museum, for supplying the relevant details from the Royal Engineer account
- ¹¹² for details of Strange's trip to the Air Ministry, see Hearn, p. 114; for official confirmation, see PRO AIR 29/512, entry for 01/07/1940
- ¹¹³ Hearn (*Flying Rebel*), pp. 115-116
- ¹¹⁴ PRO AIR 2/4586, letter from AM Deputy Director of Operations, dated 20/06/1940
- ¹¹⁵ PRO AIR 29/512, entries for 01/07/1940 and 02/07/1940
- ¹¹⁶ *ibid.*, entry for 04/07/1940
- ¹¹⁷ the precise date of Rock's promotion is unclear, and a summary of his service record merely states that he was referred to as Major in documentation after 24/06/1940. I am again indebted to Dr John Rhodes, Curator of the Royal Engineers Museum, for passing to me a summary of the late Lieutenant-Colonel Rock's service record, prepared by Major J. R. Cross, of the Museum of Army Flying, Middle Wallop, c. August 1988
- ¹¹⁸ for a list of appointments and the names of the personnel involved, see PRO AIR 29/512, introduction
- ¹¹⁹ *ibid.*, entry for 05/07/1940
- ¹²⁰ Hearn (*Flying Rebel*), p. 114
- ¹²¹ a photograph exists of this method in action, taken during the Empire Day celebrations in 1937, which shows a parachutist from Henlow clinging to the strut of a Vickers Victoria. He was wearing both a main and reserve parachutes; see "Empire Day Thrills", *The United Services Review*, (10 June 1937), p. 18
- ¹²² Hearn (*Flying Rebel*), p. 115
- ¹²³ PRO AIR 29/512, entry for 09/07/1940
- ¹²⁴ PRO AIR 2/7338, doc. 11A, paper "Development of Parachute Troops", from Air Ministry to Chiefs of Staff, n.d., c. 01/08/1940

-
- ¹²⁵ Jozef Garlinski, **Poland, SOE and the Allies**, pp. 47-48
- ¹²⁶ Newnham, p. 5. Newnham served initially at the CLS in an administrative capacity from October 1940, and was promoted to command what was by then entitled the Parachute Training School at Ringway in July 1941
- ¹²⁷ PRO AIR 29/512, entry for 06/07/1940
- ¹²⁸ PRO AIR 2/4586, doc. 7A, request from CLS to AM for aerial photography of Tatton Hall Park, n.d., c. end of July 1940
- ¹²⁹ Lord Egerton's son was killed at an air meeting in Bournemouth in 1910, which Strange also attended as a Yeomanry officer; see Hearn (*Flying Rebel*), pp. 116-117
- ¹³⁰ PRO AIR 29/512, entry for 07/07/1940; and PRO AIR 2/4586, doc. 10A, Action Copy Signal from CLS to DDCO (AIR), dated 07/07/1940
- ¹³¹ *ibid.*, entry for 08/07/1940; and PRO AIR 2/4586, doc. 11A, Postagram from AM to CLS Ringway, and doc. 15A, Message Form from AM to CLS Ringway and 22 Group, both dated 08/07/1940
- ¹³² PRO AIR 2/4586, doc. 14A, Message Form from AM to Commander, Chester Area, dated 08/07/1940
- ¹³³ *ibid.*, doc. 28C, letter from Ringway to HQ 22 Group, detailed proposal for aircraft landing zone at Tatton Park, dated 20/07/1940; and doc. 28B, Postagram from 22 Group to HQ Works Area No. 4, request for survey of Tatton Park to assess suitability as a powered aircraft landing zone, dated 13/08/1940. It is unclear whether the CLS produced the proposal on its own initiative, or as the result of prompting from above
- ¹³⁴ *ibid.*, doc. 21A, letter from Lord Egerton to Vice Secretary of State for Air, dated 24/07/1940
- ¹³⁵ see Hansard, Vol. 363, Session 1939-1940, July 16 – August 1
- ¹³⁶ for details see Franklyn Arthur Johnson, *Defence by Committee*, pp. 278-279; and Bill Jackson & Dwin Bramall, *The Chiefs*, pp. 183-184
- ¹³⁷ see Johnson, p. 279
- ¹³⁸ see Jackson & Bramall, pp. 191-192
- ¹³⁹ the full course of this affair and the documentation it generated is too extensive to be listed in full. For highlights, see PRO AIR 2/4586, doc. 28D, dated 11/08/1940; doc. 31A, letter from GHQ Home Forces to AM, dated 18/08/1940; doc. 32A, letter from AM DO to 22 Group, dated 23/08/1940; doc. 34A, dated September 1940; docs. 36A & B, dated 28/09/1940 and 03/09/1940 respectively; and doc. 53C, letter from Cheshire War Agriculture Executive Committee, dated 24/03/1941
- ¹⁴⁰ PRO AIR 29/512, entry for 11/07/1940
- ¹⁴¹ for a sample verse, see Victor Dover, *The Sky Generals*, p. 25
- ¹⁴² Newnham, pp. 78-82
- ¹⁴³ PRO AIR 29/512, entries for 15/07/1940 and 16/07/1940; and Newnham, p. 54
- ¹⁴⁴ Newnham, p. 56
- ¹⁴⁵ Otway, p. 31
- ¹⁴⁶ nine dummy drops, using sandbags to provide aircrew training and to test parachute and aircraft modifications were carried out at Ringway on the day the Commando pupils arrived, and these flights were subsequently used to give the trainees air experience at the same time; see PRO AIR 29/512, entries for 09 & 14/07/1940
- ¹⁴⁷ according to operational records, flying was suspended for two out of three days in the period 10-12 July 1940, due to high winds and rain; see PRO AIR 29/512, entries for 10 & 12/07/1940

¹⁴⁸ *ibid.*, entry for 11/07/1940

¹⁴⁹ quoted from Hearn (*Flying Rebel*), p. 117

¹⁵⁰ PRO AIR 29/512, entry for 13/07/1940; for Strange's involvement, see Hearn, p. 117. Curiously, the operational records specifically refer to the use of X-type parachutes at this time, but this type was not developed until August 1940, following a fatal parachute accident at Tatton Park on 25 July 1940. Entries in the CLS Operational Record Book appear by date, and the error presumably arises from the entry being written in after the given date from other notes, at some point after the X-type parachute was in general use

¹⁵¹ PRO AIR 29/512, entries for 14 & 15/07/1940

¹⁵² *ibid.*, entry for 16/07/1940. Curiously, this precisely replicated German experience, for the same mishap occurred at the demonstration to sell the parachute idea to the *Luftwaffe's* Hermann Goering Regiment on 1 October 1935; see MacDonald, *op cit.*, pp. 11-12

¹⁵³ see for example PRO WO 32/4723, doc. 76B, teleprint from WO AG 17 to HoFor, All Commands, dated 01/10/1940; doc. 82A, signal from WO AG 17 to HoFor, dated 04/10/1940; and doc. 96A, telegram from WO AG 17 to Eastern Command, dated 22/10/1940

¹⁵⁴ Hearn (*Flying Rebel*), p. 114

CHAPTER FIVE

Laying the Groundwork: The Development of a British Airborne Infrastructure, July 1940 – April 1941

Thanks largely to the unorthodox efforts of Louis Strange, the Central Landing School (CLS) metamorphosed from paper to functioning reality in just three weeks, although this transformation was not as smooth as the bare bones would suggest. Even the weather conspired against the new enterprise; according to operational records, three days in the first seven after the initial batch of Commando trainees arrived at Ringway on 9 July 1940 were unsuitable for parachuting and/or flying, due to high winds and rain.¹ The most serious obstacle faced by the CLS in the period immediately following its establishment was not inclement weather, however, but the *ad hoc* and largely untried nature of its equipment and operating procedures.

This chapter will therefore detail how the staff at Ringway rectified problems with parachutes and aircraft, and how parachute training was implemented. It will also analyse received Air Ministry wisdom with regard to aircraft provision, detail how the structure at Ringway was expanded to accommodate its growing responsibilities, and briefly examine the first British parachute operation.

I. The First Major Stumbling Block: Parachute Problems

As well as confirming the suitability of the new landing zone, the first CLS parachute descents onto Tatton Park on 13 July 1940 tested the modified Irvin training parachutes,² and the utility of the alterations to the CLS's Whitley bombers. CLS staff, including Major Rock and other Army candidate instructors, carried out more descents over the next seven days.³ The CLS was thus combining operational testing with training, for none of Strange, Rock, or almost any of the other CLS staff had any previous parachuting experience. Although arguably obliged by circumstances, this was extremely hazardous and potentially lethal. Descents by Commando volunteers began on 22 July 1940. Starting at 0500 to take advantage of early morning clear weather, five Army officers and six other ranks had been successfully dropped by 0800 the same day.⁴ A further seventy-two descents were carried out over the same period on 23 July 1940, most from the floor aperture, and air experience flights were provided for the remainder of No. 2 Commando's B and C Troops when the weather became unsuitable for parachuting.⁵ No parachuting took place on 24 July 1940. On 25 July, twenty-one successful descents were carried out before Driver Evans, Royal Army Service Corps (RASC) was killed by a parachute malfunction. Further parachute training was prohibited with effect from 16:45 hours that day.⁶

The death of Driver Evans was directly attributable to the *ad hoc* modification of the Irvin training parachute for static-line operation. This consisted of permanently attaching one end of a length of woven tape to the manual ripcord handle on the parachute,⁷ the other end being secured with a clip to a strong point within the aircraft. This was supposed to allow the parachute to open automatically as the parachutist fell away from the aircraft. However, the modification failed to address the opening sequence of the Irvin parachute, which emerged canopy-first from the pack. This was not normally a problem because the parachutist was already falling with sufficient speed to allow the canopy to inflate properly before operating the ripcord, while in pull-off jumps the slipstream from the aircraft served the same purpose. With a static-line however, the parachute opening sequence occurred while the parachutist was much closer to the aircraft. This resulted in the rigging lines leaving the pack before the canopy was fully inflated, which ran the risk of the lines entangling the canopy and preventing it from deploying fully, a mishap that became known as a "Roman Candle". This could be exacerbated by poor exit posture by the parachutist, which could result in arms and legs becoming entangled in the rigging lines.⁸ It was one or both of these circumstances which killed Driver Evans.

Driver Evans was not equipped with a reserve parachute. Group-Captain Maurice Newnham, who commanded parachute training at Ringway in April 1941, justified this omission on the following grounds. Reserve parachutes meant a considerable increase in the weight and bulk of the individual parachutist, an important factor given the dimensions and performance of the Whitley. There was also a danger that a deployed reserve might become entangled with the failed main parachute. In addition, the low operational jumping height of five to six hundred feet did not allow sufficient time for a reserve to be deployed in any case, and night drops would reduce its effectiveness yet further due to the lack of visual references. Newnham therefore considered it better to provide one reliable parachute, seeing reserve parachutes as an unjustifiable drain upon "...money, material and labour resources".⁹ This was reasonable, although the Soviets used reserves from at least 1931,¹⁰ and that US airborne forces were also equipped with them from the outset.¹¹ Nonetheless, it remained British practice to jump without a reserve until well into the 1950s, when their use was enforced by NATO regulations. Even then, the Parachute Regiment's 3rd Battalion jumped into Suez in November 1956 without reserves. This was due in part to aircraft weight restriction, and because the small drop zone (DZ) obliged a drop from seven hundred feet, again considered too low to make provision of a reserve parachute worthwhile.¹²

The death of Driver Evans and the ban on parachute training were embarrassing for the CLS because a visit by high-ranking officers, including the Director of Combined Operations (DCO), was scheduled for 26 July 1940. A demonstration was held for the visitors by instructors using rip-cord parachutes, while the new aperture technique was demonstrated with dummy drops that also served as additional testing for the modified Irvin training parachutes. However, the ban proved fortuitous, because three of the eight parachutes used malfunctioned in the same way that killed Driver Evans.¹³ The modified Irvin training parachute was thus removed from service on 29 July 1940 and, as no alternative was immediately available, No. 2 Commando was despatched for a fortnight's tactical training.¹⁴ CLS staff began working to rectify the parachute problem immediately on the death of Driver Evans. According to operational records, an officer detached from the PDF returned to Henlow to test modified parachutes on 26 July 1940.¹⁵ It is unclear whether these were tests on the existing modified Irvin parachutes, or of a re-design of some description, but as Strange visited Henlow the next day and selected a "suitable type" of parachute for delivery by 29 July, this would suggest the latter.¹⁶ The operational records make no specific mention of it, but the CLS called in Raymond Quilter and James Gregory of the GQ Parachute Co. at this time.¹⁷ However, the operational records do refer to the successful testing of "Quilter parachutes" on 30 July 1940,¹⁸ and a secondary source refers to Gregory and Quilter producing a modified parachute "within a week" of being called in.¹⁹ It is reasonable to assume that the Quilter product was selected by Strange at Henlow on 27 July.

Quilter simply redesigned the parachute pack to reverse the parachute's opening sequence:

"When the man jumped, the parachute pack containing the canopy and rigging lines was broken from his back by a series of progressively stronger ties, and hung from the aircraft. As he fell, the rigging lines were dragged from this pack and by the time the canopy appeared, the man was the length of the rigging lines, 20 feet below. A final tie, holding the apex of the canopy to the pack, then broke and the parachute was fully extended leaving the pack and static line attached to the aircraft. This method of deployment was an improvement upon that of the American [Irvin] pattern being more controlled and simpler, and giving approximately only a fifth of the shock previously experienced."²⁰

Thus there was less opportunity for the rigging lines to become entangled with the canopy, because they were fully extended *before* the canopy emerged from the pack. Quilter's new system was subsequently linked to an improved harness designed by Irvin, which

incorporated the latter's patent quick release box. The result was christened the X-type, and continued in British airborne service until the 1960s.²¹

Testing Quilter's parachutes with sandbag dummies began on 30 July 1940. The system functioned perfectly, with the parachutes deploying fully at heights as low as one hundred feet. A post-test conference decided that the Irvin training canopies were to be retained for use with Quilter's modified packs, five hundred of which were to be provide at a rate of one hundred per week. The remaining Irvin ancillary equipment was to be returned to Henlow. The new equipment was to be put through five hundred dummy drops before live training resumed.²² The dummy tests began the next day, as did the transfer of the Irvin canopies to the GQ works at Brookland for conversion. The CLS Operational Record Book refers to the receipt of one hundred and fifty modified parachutes on 2 August 1940, and the despatch of a further one hundred and fifty canopies and harnesses to Brookland for modification the same day.²³ On 7 August 1940 Strange informed No. 2 Commando that parachute training would re-commence the following day.²⁴

Raymond Quilter's work was extremely efficient and highly praiseworthy, but it is possible that the underlying motive for it, and indeed for calling in the GQ Parachute Co., was not totally altruistic. The parachute that killed Driver Evans was an Irvin product, and it would be logical to expect the manufacturer to be called into any investigation. However, this does not appear to have been the case. The only secondary source to link Irvin to Quilter's modifications is Irvin's biography, and then only indirectly. Irvin is credited with modifying the X-type parachute harness "whilst Quilter and Gregory were working on the deployment system".²⁵ CLS operational records for the period only mention Irvin once, when he attended a private conference at the CLS on 23 July 1940, two days before Driver Evans was killed.²⁶ In contrast, Quilter's name first appears in a list of conference attendees at the CLS on 30 July, and frequently thereafter. It is also highly likely that he was at Henlow on 27 July, and that the modified parachute selected by Strange on 29 July was his.²⁷

Irvin's lack of involvement is unusual to say the least, and contrasts sharply with events following the death of another trainee, Trooper Watts, when a modified parachute failed on 27 August 1940.²⁸ Quilter was on the scene immediately to investigate the cause, which turned out to be the method of securing the parachute within the modified pack. He was also allowed to formulate the necessary modifications the same day, and to put them into effect at the GQ works two days later. This was of course laudable, but it begs the question why Irvin was not consulted with similar rapidity following the death of Driver

Evans. This is all the more curious because his biography claims that Irvin had prior misgivings at the way in which his parachute was being adapted.²⁹ Indeed, this may have been the reason for his visit to the CLS on 23 July 1940.

The speed with which Quilter and Gregory produced their modified deployment system also arouses suspicion. It could merely be, as the secondary sources invariably imply,³⁰ due to patriotic diligence. However, it could also mean that work was underway before the death of Driver Evans, and that his demise provided a means to avoid placing a lucrative parachute monopoly in the hands of a neutral foreign national, for Irvin was an American citizen. Motivation could therefore have been pragmatic, in order to guarantee access to future parachute production. Dividing production between producers in this way also followed RAF procurement procedures established in the inter-war period, when the Air Ministry spread funding wide and thin, to save manufacturers from bankruptcy and preserve their production facilities against future need. This had the useful side-effect of stimulating competition and driving down prices.

On the other hand, the potential profit offered by parachute production cannot be discounted either. The Air Ministry authorised the purchase of 10,000 Irvin training parachutes on 10 June 1940,³¹ a huge order by contemporary standards, and one that was potentially the first of many. Home-grown enterprises like the GQ Parachute Co. wished to get a market share. Nor would it be surprising if the military wished to assist them for patriotic reasons; the fact that Quilter was “an ex-officer of the Grenadier Guards” may also have been significant.³² Quilter’s re-design immediately earned him an order for five hundred parachute packs. More significantly, mating it with the Irvin training canopy guaranteed his company a half share in any further parachute production, an arrangement that offered potentially huge profits. Of course, there may have been nothing sinister about Irvin’s apparent lack of involvement in the re-design of his parachute. He may have been involved but unacknowledged in the source material, or he may have absented himself for some reason. It could also be that Quilter’s and Gregory’s involvement was attributable to Strange’s penchant for direct action. Nonetheless, the available evidence suggests that Irvin could have been deliberately sidelined, for pragmatic reasons at best, or for chauvinism and financial gain at worst.

Be that as it may, the fact remains that the CLS staff and their civilian advisers/suppliers overcame an unforeseen problem with commendable speed. In the process, however, a further problem became apparent: the suitability of the aircraft allotted to the CLS for parachuting.

II. The Second Stumbling Block: The Provision of Aircraft for the CLS - Availability or Duplicity?

According to the Air Ministry conference of 10 June 1940, the Armstrong Whitworth Whitley was the only suitable aircraft available for parachuting.³³ It is unclear how this conclusion was reached, but while it may be an exaggeration to suggest that the Air Ministry deliberately chose the Whitley for its unsuitability, it would have been a prime candidate had that been the case. This was the certainly the opinion relayed to Churchill by the DCO, Admiral Sir Roger Keyes on 27 July 1940:

“I am strongly of the opinion that the Whitley machines are thoroughly unsatisfactory. They can carry only eight men, who would have to sit throughout the passage overseas, huddled up in the bomb tube in great discomfort, and then drop through the middle of a small hole, with no margin whatever for error in poise. Conditions which are calculated to damp the light-hearted enthusiasm with which these young men volunteer for a hazardous adventure.”

He went on to mention that the Air Ministry was considering the Bristol Bombay as an alternative, although there was a shortage of suitable engines, and recommended that efforts be made to secure Douglas DC aircraft direct from the US. In the interim, he suggested that six Douglas aircraft belonging to the Dutch airline KLM be obtained, by charter if necessary.³⁴ Keyes closed by calling upon Churchill to use his influence to secure the Dutch aircraft.³⁵

The Air Ministry responded promptly by despatching an officer to the US to hunt for surplus Douglas aircraft, and by approaching a Mr van Kleffens at the Dutch Foreign Ministry about the KLM machines. The latter initiated a farcical sequence of events, which failed to secure the Dutch aircraft for the CLS, and that exposed Air Ministry administrative confusion, if not outright duplicity, in the process. Van Kleffens' response on 2 August 1940 was first to ask why the aircraft were considered indispensable, and to enquire what provision would be made for replacing them in the event of loss or damage. Only then did he offer to approach KLM.³⁶ Ismay received a further note the next day from Sir Arthur Street, head of the Air Ministry department involved, informing him that he [Street] had been unable to contact van Kleffens to pursue the matter further.³⁷

However, on 5 August 1940, Ismay was informed that separate Air Ministry departments were trying to acquire the KLM aircraft for parachuting and for use in West Africa.³⁸ The source of the information is unclear, although it may have come from the Foreign Office, but appears to have been prompted by a telephone conversation with Keyes. The letter

also claimed that the Air Ministry had failed fully to explore UK produced civil aircraft for parachuting, suggested the De Havilland Frobisher as a candidate, and expressed an intent to seek clarification from Street in person.³⁹ The outcome of this is unknown, although on 9 August 1940 Ismay himself wrote a curious letter to van Kleffens, informing him that he no longer required the aircraft, which the Air Ministry were attempting to secure for another project.⁴⁰ Van Kleffens replied three days later, thanking Ismay and finishing with a cryptic reference to the KLM aircraft being turned to "another good purpose for the Allied cause".⁴¹

This would suggest that Ismay either erroneously believed that the KLM aircraft were no longer required at the CLS, or that he knew that they had already been obtained by the Air Ministry and assigned elsewhere. It is likely they ended up in Africa, for an Air Ministry paper on 12 August 1940 mentioned their suitability for the "trans-African route" because they were equipped for tropical climates.⁴² This is doubly curious, because Churchill wrote to Ismay on 10 August 1940, asking him specifically whether the DCO was to get the KLM aircraft, and offering to put pressure upon the Dutch authorities to secure them.⁴³ Ismay's reply was unenlightening, merely referring amongst other matters to the fact that it was not possible to acquire the KLM aircraft (downgraded to four rather than the original six), and to the Frobisher being investigated as a possible alternative.⁴⁴ Thus, despite acknowledging the suitability of the Douglas aircraft for parachuting,⁴⁵ the Air Ministry nonetheless assigned them elsewhere, which does not suggest a high level of commitment to the airborne project. The result of this episode was that the CLS was left with the Whitley and, as that aircraft was the cause of the first rupture in the joint command structure of the CLS, it may be enlightening to examine it in a little more detail.

The Whitley was a twin-engine monoplane, designed to meet Air Ministry specification B.3/34 issued in July 1934. This was one of the first specifications for a pure bomber, as opposed to a dual-purpose "bomber-transport". This explains the Whitley's unsuitability for parachuting, and it is ironic that it originated from a prototype 1935 bomber-transport, which was re-designed as a bomber to meet the new specification.⁴⁶ The CLS shared Keyes' opinion of the Whitley, and considered it to be a major factor in the high wastage rate amongst the first Commando trainees.⁴⁷ Strange described the aircraft as:

"...dark and gloomy with its hole in the middle [of the floor], and...bad for the nerves. The sight of other men disappearing through the hole is an unpleasant one, and the prospect of scraping one's face on the side is not encouraging."⁴⁸

Another member of the CLS staff, an RAF parachute pioneer from the 1920s, expressed a similar opinion, and pointed out that the latter mishap was virtually guaranteed for at least half the jumpers in a full load of ten:

“And that Whitley was diabolical!...The fuselage...was never made for passengers, let alone ones with bulky parachutes on their backs. It was merely a dark, narrow tunnel designed to join the nose to the tail. Into this sewer-like passageway one crawled on hands and knees to take a seat on the cold floor, five men forward of the hole and five aft if there was a full stick of ten jumpers. Being on the forward side was much preferred. From aft, there was a tendency for the legs to be blasted backwards as they entered the slipstream and, as the body pivoted, for the face to be smashed against the forward edge of the hole. ‘Ringing the bell’ it was called.”⁴⁹

It is thus hardly surprising that Polish parachute trainees at Ringway in 1941 composed a song that began “‘The Whitley soars through the clouds like a tomb...Inside are ten paratroopers as if they were dead...’”.⁵⁰

Events following the death of Driver Evans lowered confidence in the Whitley further still. On 31 July 1940 the static-line bar came adrift, dumping sandbag dummies and unopened parachutes to the ground, and nearly taking the despatcher with them.⁵¹ Another dummy drop came close to catastrophe when a parachute canopy became snagged on a Whitley’s tail wheel, almost causing a crash. This was caused by excessive slipstream, and resulted in an edict that Whitleys could only drop parachutists in a tail-high attitude, with the engines throttled back, and at an airspeed of not more than ninety miles per hour.⁵² A fairing was subsequently fitted to the tail-wheels of Ringway’s Whitleys after a similar mishap in September 1940.⁵³ Alarming as these accidents were, they were relatively easily remedied, but confidence was not so easily restored. Thus, when Strange informed Rock on 7 August 1940 that parachute training would recommence the next day, Rock refused to allow Army personnel to use the Whitley without a direct order from either the DCO or the War Office.⁵⁴ Strange’s response was to point out that “...it was not customary in the RAF to suspend training just because a man got killed”,⁵⁵ and the next day personally led three CLS instructors in jumping with the new parachutes to demonstrate his confidence.⁵⁶ Rock, however, was adamant, and relayed his decision to the War Office, with a request that Bristol Bombay aircraft be substituted for the Whitley.

The War Office backed Rock's stand, and the Air Ministry’s response was a conference entitled “Present Situation in Respect of the Development of Parachute Training”, held on 12 August 1940.⁵⁷ The conclusions were distributed to the Chiefs of Staff, Churchill and the War Office. These boiled down to making do with the Whitley and “...either accept the

current casualty rate or give up for the time being the idea of parachute troops".⁵⁸ Left with little option, the War Office lifted the Whitley ban on 14 August 1940,⁵⁹ and parachute training re-commenced the following day.⁶⁰ Because the War Office had no independent access to RAF aircraft, the Air Ministry's pronouncements were accepted at the time, and have remained unchallenged ever since. Consequently, the 12 August 1940 paper merits detailed examination, because it casts doubt on this received wisdom, and provides evidence of Air Ministry inconsistency, if not deliberate obstructionism.

The paper began by reiterating the Air Ministry position from 10 June 1940,⁶¹ which was that production of dedicated transport aircraft was not feasible, that parachuting had to be a secondary role for bombers, and that the Whitley was the only option available. That no more than a handful of Whitleys had been assigned to Ringway was justified with the circular argument that "...all the commandos [sic] were not yet available or trained". This conveniently overlooked the fact that the Air Ministry had previously promised the CLS twenty-one Whitleys,⁶² or that six aircraft might be insufficient to meet the training needs of five hundred parachutists. The Whitley's limitations, and particularly the aperture exit, were acknowledged, but it was pointed out that no suitable aircraft with doors were available.

This was justified by a brief explanation of the shortcomings of possible alternatives. The Frobisher was ruled out because parachutists might strike the tail after exiting the aft mounted door. The door on the De Havilland Flamingo, a small production-run twin-engine airliner, was too small, and the type was not currently in production or available in sufficient numbers.⁶³ The Bristol Bombay was considered suitable for dropping parachutists, but only three of the twenty-one in the UK had engines,⁶⁴ which were claimed to be in short supply. In addition, the Air Ministry still considered the Bombay unsuitable because it was unarmed,⁶⁵ and the type was in any case required for vital RAF communication work, including ferrying replacement pilots to Fighter Command.⁶⁶ Douglas DC aircraft were also deemed suitable, but the five KLM machines in the UK were considered best employed on the "trans-Africa route", because they were fitted out for tropical operation. Reports of surplus Douglas civil aircraft in the US were considered erroneous. The new Short Stirling heavy bomber was suggested as a possible long-term alternative, pending investigation of door modifications and the rectification of more general centre of gravity problems.⁶⁷

Authoritative as all this appears, it does not stand up to detailed scrutiny. First, it is unclear how the conclusion that the Stirling, Flamingo and Frobisher had unsuitable doors

was reached. The only establishment qualified to make such judgements was the CLS, but operational records make no mention of such aircraft being present at Ringway or being examined by personnel at this time. The Stirling was later employed in a limited capacity for parachuting, but with a large opening at the rear underside which proved as unpopular and dangerous as the Whitley aperture. This did not occur until April 1944,⁶⁸ however, and in any case the CLS did not examine the Stirling until January 1941.⁶⁹ Similarly, the Flamingo, or its military incarnation the Hertfordshire, was not examined by Ringway until April 1941.⁷⁰ The CLS does not appear to have examined the Frobisher, but line drawings show the door a significant distance from the tail, casting doubt upon the Air Ministry's specific reservations.⁷¹ In any event, it is difficult to envisage the aircraft being any more problematic than the Whitley, with its ninety miles per hour speed limit and tail-high dropping attitude.

The Air Ministry objections to the Bristol Bombay were equally flimsy. The Bristol Pegasus powerplant installed on the Bombay was widely used by RAF aircraft in a variety of marks, which should have widened its availability.⁷² Given this, it should have been possible to divert a handful to re-equip existing Bombay airframes. A mere six engines would have allowed the CLS to replace its entire complement of Whitleys, and thirty-six would have restored the entire UK Bombay complement to airworthiness. Neither do the objections to the Bombay's lack of armament stand up. The aircraft was originally equipped with two machine-gun turrets, which may have been removed and faired over on UK based transport versions.⁷³ The same objection, incidentally, should have ruled out the unarmed Douglas machines. Neither did the supposed drawbacks of the Bombay deter the Air Ministry from assigning six of them to the first operation carried out by the British parachute force, against the Tragino aqueduct in southern Italy in February 1941. It took the personal intervention of the CLE's commander to obtain six Whitleys instead, upon which all operational planning, training and calculations had been based.⁷⁴ In fairness, it should be pointed out that the operation was mounted from Malta and, as the Bombay was used extensively in the Middle East,⁷⁵ it may have been a matter of availability rather than obstructionism.

The Air Ministry claim that available Bombays were fully occupied is also questionable, for a Bombay from No. 271 Squadron arrived at the CLS on 6 August 1940 for parachute tests.⁷⁶ Indeed, this was the only parachute aircraft available at Ringway during the War Office ban on the Whitley. Removing the door and rigging a strong point for attaching static-lines modified the aircraft, although the latter was less than robust. As a member of No. 2 Commando recalled:

“The door had been taken off and a handle had been fixed to the fuselage structure on the left of the door, to which the end of our static line was tied. I noticed after the first three [parachutists] had jumped the handle became very loose”.⁷⁷

Nonetheless, all members of A and B Troops completed a single jump without mishap on 12 August 1940, a total of seventy-seven jumps.⁷⁸ Twenty-two more were carried out the following day, and a further thirty-four on 14 August 1940, when the Bombay returned to No. 271 Squadron.⁷⁹

Why the Bombay came to Ringway is unclear. It may have been another example of Strange's unofficial string pulling. More likely, it was part of an Air Ministry contingency plan to deflect criticism for failing to provide an alternative parachute aircraft during the War Office ban on the Whitley, and to cast the Army's action in a bad light. It was a remarkable coincidence that the aircraft only appeared at Ringway after the War Office ban on the Whitley, and was recalled the very day that it was lifted. The fact that the commander of No. 271 Squadron visited the CLS on 9 August 1940, to gather information on parachuting,⁸⁰ reinforces the hypothesis that the Bombay was present with Air Ministry sanction. Moreover, the aircraft spent nine days at the CLS, which contradicts the claim that all airworthy Bombays were fully engaged in vital communications work.

The most damning evidence of Air Ministry duplicity stems from the fact that, despite Air Ministry protestations, there does appear to have been another suitable aircraft available; the Handley Page Harrow.⁸¹ Originally designed as a bomber-transport, the Harrow was ordered off the drawing board with structural modifications to enhance its bombing capabilities in 1935, to Air Ministry specification B.29/35. One hundred aircraft, including two prototypes, were produced and in service by December 1937.⁸² The type served as a makeshift bomber in the late 1930s, although a “central requirement” of this service was the “...ability to revert to the transport role once that short-term service...had ended”.⁸³ The five squadrons concerned were re-equipped in 1939, and the Harrows were withdrawn to No. 19 Maintenance Unit (MU) at Kemble. Reconfiguring them into transports began in March 1940. By May 1940 at least ten modified examples, nicknamed “Sparrows”, were in service with No. 271 Squadron for general transport duties.⁸⁴ The Harrow was therefore already in service as a transport aircraft *before* Churchill issued his parachute directive. It was available in roughly the same numbers as the promised Whitley Group, and it was serving with the same squadron that supplied the solitary Bombay to the CLS at the beginning of August 1940.

Like the Bombay, the Harrow was a twin-engine, high-wing monoplane, which in its final form was capable of carrying twenty fully equipped troops or 9,500 pounds of cargo.⁸⁵ It possessed a starboard side-door,⁸⁶ and was originally equipped with gun turrets.⁸⁷ The performance of the Harrow was inferior to that of the Whitley, especially in regard to speed,⁸⁸ but this was a minor flaw, if not a positive advantage in a parachute aircraft, particularly bearing in mind the speed limit imposed on the Whitley following the tail-wheel fouling episode. The Harrow remained in service in the European theatre throughout the Second World War, the last example being withdrawn from service in April 1945.⁸⁹ Some examples were fitted out for casualty evacuation after D-Day. Ironically, these were involved in ferrying 1st Airborne Division casualties back to the UK from Arnhem in September 1944.⁹⁰

The Harrow was thus suitable and available for parachuting service. Why the Air Ministry failed to suggest it, or to send a Harrow to the CLS with or instead of the Bombay, is open to speculation. Given its widespread use, it is also odd that the type does not figure in the primary or secondary accounts. Only one of the latter, a technical source, makes a frustratingly off-hand reference to a single Harrow serving at Ringway at an undetermined time,⁹¹ although there is no mention of this in the operational records. It is inconceivable that the Air Ministry was unaware of the Harrow, and it is difficult to escape the conclusion that the Harrow did not figure because the Air Ministry did not wish it to.

There are thus a number of clear inconsistencies in the Air Ministry's 12 August 1940 paper. The key to understanding the Air Ministry's perspective lies in its repeated insistence that parachuting had to be an alternative role for bombers. This appears illogical until it is remembered that the Air Ministry's overriding preoccupation was strategic bombing. The rationale for this then becomes clear, and was twofold. The Air Ministry was looking to avoid the diversion of production capacity to transport aircraft, whilst simultaneously attempting to use the parachute requirement as justification for an expansion of bombing resources. It is therefore no coincidence that the only aircraft considered "possibly" suitable for parachuting in the 12 August 1940 paper was the Short Stirling bomber. The same logic explains why the Whitley had to be the "only" current parachuting option, irrespective of the availability of more suitable aircraft in even extremely limited numbers. To paint the Stirling as too suitable risked diversion of that type to parachuting, whereas assigning the obsolescent Whitley justified replacing that type with more modern aircraft. Similarly, acknowledging the suitability of the Bombay, Frobisher or Hertfordshire, or indeed the existence of the Harrow, invited the possibility of them being placed in production at the expense of bomber construction. This is further

reinforced by the unattributed claim that the Air Ministry failed to investigate fully the possibilities offered by British civil aircraft manufacturers.⁹² Acknowledging the suitability of Douglas aircraft ran no such risk, for any such would be obtained, if at all, from US manufacturers, which would not affect domestic British aircraft production.

Admittedly, this conclusion is largely based on speculation, but it fits the evidence, and particularly the covertly unfavourable Air Ministry reaction to Churchill's parachute requirement in early June 1940.⁹³ It can therefore be argued that the Air Ministry deliberately failed to supply the CLS with sufficient aircraft for two reasons. First, this would hamstring the project, with the possibility that it might be abandoned altogether as a result. Second, it allowed the Air Ministry to minimise its commitment to the project whilst maintaining a show of co-operation. This was by no means the end of the matter, for aircraft provision and suitability became the subject of a heated debate in 1941. In the interim, however, the CLS was obliged to embark upon the development of a British parachute force with literally a handful of aircraft, all of which were unsuitable, if not outright dangerous. It can also be argued that hamstringing the project underlay the 12 August 1940 paper's advocacy of a further seemingly reasonable step: the development of military gliders.

III. Rounding Out the Parachute Idea: Enter the Glider

The Air Ministry first alluded to gliders during its 10 June 1940 conference.⁹⁴ The 12 August 1940 paper expanded upon the theme, in pointing out that the Air Ministry was "...beginning to incline to the view that dropping troops...by parachute is a clumsy and obsolescent method and that there are far more important possibilities in gliders". German parachute successes were acknowledged, but with the rider that "...it seems to us [the Air Ministry] at least possible that this may be the last time that parachute troops are used on a serious scale in major operations". It was claimed that good progress had been made, and that the RAF had "...already got a suitable glider for carrying a number of troops, and they can be put into production quickly, easily and cheaply".⁹⁵

Gliders also figured significantly in a further Air Ministry paper on 31 August 1940,⁹⁶ partly prompted by badgering from Churchill. This went on to cite German success with gliders against Belgian defended positions (clearly a reference to Eben Emael), and the advantages of gliders for troop transportation. Gliders, it was claimed, could deliver troops more safely, in compact groups, and with all their equipment. They could land in very small spaces, and they allowed more efficient use of air resources, because bombers could

tow more troops in a glider than they could carry for parachuting. In addition, wooden gliders would not impose additional strain upon aircraft manufacture. The paper closed by stating that air superiority and immediate support from land forces were prerequisites for any airborne operations, and emphasised the need for firm employment principles to avoid wasted effort.

As with the use of bombers for parachuting, the Air Ministry's advocacy of gliders appears reasonable, but does not stand up to close scrutiny. Its reservations on the utility of parachutes, for example, were proved wildly inaccurate by subsequent events. Reading the future is a precarious business, but the Air Ministry's opinion was also at odds with the frenzied measures simultaneously taking place in the South of England to repel German parachute landings, in which the RAF was fully involved.⁹⁷ It thus appears that the Air Ministry's scepticism toward the parachute was coloured more by reluctance to provide the necessary transportation, than concern over tactical efficiency.

Admittedly, matters did move relatively swiftly. No. 22 Group ordered the formation of a Glider Section at the CLS on 30 July 1940, with effect from 8 August,⁹⁸ and aircraft, equipment and personnel began to arrive at the CLS on 7 August 1940.⁹⁹ They had been previously engaged in tests to ascertain the radar profile of gliders as part of anti-invasion measures at Christchurch.¹⁰⁰ According to Hearn, the glider pilots were promptly arrested by Strange when they arrived unannounced, although operational records show that the CLS was warned of their arrival on 3 August 1940.¹⁰¹ This was Strange's standard tactic when matters required clarification. He allegedly "...had an understanding with John Rock that when they received contrary instructions from their respective Services, one would place the other under arrest so that the least constructive of the orders could be ignored".¹⁰² Wing-Commander "Mungo" Buxton visited Ringway on 9 August to arrange further glider experiments, and presumably to clarify matters with Strange.¹⁰³ Strange discussed the formation of a separate glider sub-organisation at the Air Ministry on 11 August 1940.¹⁰⁴ Official Air Ministry authorisation for a Glider Flight at the CLS was received on 13 August 1940,¹⁰⁵ and Wing-Commander Buxton was temporarily posted in to oversee its establishment on 23 August 1940.¹⁰⁶

Laudably swift as this was, it did not really add up to much in practical terms, and certainly not as much as the Air Ministry's pronouncements inferred. It is also unclear which glider the Air Ministry was referring to as being ready to go into production. Otway refers to the requirement for the RAF's first glider, the eight-seat General Aircraft Hotspur Mk. 1, being put to the manufacturer in June 1940.¹⁰⁷ This may have been the case, but

there is invariably a lag between a requirement being put to a manufacturer and the manufacturer coming up with a suitable design. Thus, even allowing for the highly creditable fact that the prototype for Spec. 10/40 made its maiden flight on 5 November 1940,¹⁰⁸ it is highly unlikely that the design was finalised as early as 12 August 1940. The Air Ministry was therefore being rather economical with the truth when it claimed to have a model ready for production on that date.

In the fullness of time, gliders proved to be a vital addition to the British parachute project, albeit one which falls largely outside the time-span of this work. The standard British Airborne Division organisation included an entire glider-transported brigade, which represented a third of the division's infantry strength. These were called "Airlanding Brigades", to distinguish them from their parachute counterparts. In addition, virtually all the division's support elements, light transport and equipment was delivered by glider, including signals, artillery, anti-tank and field ambulance units.¹⁰⁹ The majority of this was carried in twenty-five seat Airspeed Horsa gliders, whilst heavier items were carried in General Aircraft Hamilcars, the largest and heaviest Allied glider used in the Second World War. The latter had a payload of seven tons, which included specially designed light tanks. Both these gliders came from specifications issued in September 1940, and were produced with similar speed to the Hotspur. The Horsa first flew in September 1941, and the Hamilcar in March 1942.¹¹⁰ It should be noted, however, that there was a significant time-lag before both types were available in numbers. The Horsa made its combat debut November 1942, when a handful were despatched (and lost) in the ill-fated raid upon the German heavy water plant at Vermork in Norway, and the type was not available in numbers until the following year, being employed in Sicily in mid-1943.¹¹¹ The Hamilcar did not make its operational until the Normandy invasion in June 1944.

The glider idea therefore proved to be a good one, but whether that was because, or in spite, of the Air Ministry is open to speculation. This is apparent in the disparity between the Air Ministry's apparent enthusiasm for the glider idea, and the resources they actually allocated to it. The first increment to arrive at Ringway on 7 August 1940 consisted of two First World War vintage Avro 504 biplanes, four ground-crew NCOs, at least one civilian sport glider, and a Ford motor car for towing.¹¹² This grew to six single-seat and one two-seat sport sailplanes commandeered from civilian owners,¹¹³ whilst the towing complement was augmented by two Lysander co-operation aircraft and at least one Tiger Moth biplane. Moreover, the powered machines may have been assigned to the CLS for general duties, rather than purely as glider tugs.¹¹⁴ The complement of Avros was reduced to one when the other was written off in a ground accident.¹¹⁵

To be fair, the Air Ministry could only provide what existed, and the handful of hastily camouflaged civilian sailplanes were the only gliders in existence in the UK. Even the application of camouflage paint proved problematic, because of their highly varnished finish, and the CLS had to seek assistance from civilian experts.¹¹⁶ The glider shortage was so acute that it was proposed at one point to use the airframes of powered aircraft as makeshift gliders for research purposes.¹¹⁷ Thus, until the Hotspur appeared, the glider section was obliged to "...train as best...[it]...could a nucleus of glider instructors and tug pilots" with the motley and inadequate means at its disposal.¹¹⁸ This attitude was admirable, but the practical limitations imposed by such constraints severely limited the scope and value of the work. Consequently, it is not unreasonable to question why the Air Ministry bothered, particularly as the assigned tug aircraft proved inadequate to tow a Hotspur when the latter did appear.¹¹⁹ It would surely have made more sense to set up the necessary administrative arrangements and await the arrival of the production gliders, rather than cluttering up the already inadequate facilities at Ringway.

Having recommended the glider with such enthusiasm, the Air Ministry could have been motivated by a desire to be seen to be taking action. On the other hand, it is also possible that the suggestion of gliders as an alternative to parachuting was merely a time-wasting ploy, intended to allow the Air Ministry to avoid providing sufficient parachute transports. If so, the Air Ministry was again attempting a double gambit to secure additional resources for bombing. The conference of 10 June 1940 referred to large gliders.¹²⁰ The justification for specifying large gliders became clear in the paper of 12 August 1940, which suggested that gliders could also be employed as additional fuel tanks for bombers, or to carry additional bombs.¹²¹ This shows that Air Ministry was again playing a double game. Despite citing the German example as justification, it was not intending to emulate it.¹²² It was attempting to stymie the airborne project, whilst ensuring it received full benefit from any air provision made.

Churchill had been monitoring the situation personally, and was not impressed. On 6 August 1940, when informed that five hundred parachutists were undergoing training, he scrawled "I said 5000" on the report,¹²³ and on 10 August, he requested further clarification from Ismay.¹²⁴ This did not appear until the end of that month, via the Air Ministry papers of 12 and 31 August 1940, and a detailed minute from the Director of Combined Operations on 24 August 1940.¹²⁵ Ismay's synthesised report also appeared on 31 August 1940.¹²⁶ Thus Churchill was aware of the Air Ministry's new enthusiasm for gliders, and his response to Ismay's report clearly illustrated his suspicions:

"Of course if the Glider scheme is better than parachutes, we should pursue it, but is it being seriously taken up? Are we not in danger of being fobbed off with one doubtful and experimental policy and losing the other which has already been proved? Let me have a full report of what has been done about the Gliders."¹²⁷

This sceptical reaction was relayed to the Chief of the Air Staff,¹²⁸ and a response from the Vice-Chief of Air Staff and the Air Ministry's Department of Plans appeared on 5 September 1940.¹²⁹ This reiterated glider activity to date, and claimed that twelve eight-seat gliders were under construction, and that the design of an eight-ton tank-carrying glider was in progress. It also reported a preliminary investigation into a forty-seat design, and closed by referring to a joint conference scheduled for 5 September 1940, to formulate a unified airborne policy with the War Office and the Director of Combined Operations.¹³⁰

It is doubtful whether this satisfied Churchill, given his jaundiced view of the Air Ministry, which he had previously described to his personal secretary as "a most cumbrous and ill-working administrative machine".¹³¹ Nonetheless, he was obliged to accept the Air Ministry testimony because there was no independent means of verifying it, in much the same way as the War Office was obliged to accept the Air Ministry's word on the suitability and availability of aircraft. However, the 5 September 1940 conference did provoke a heated and extended debate on the operational role the new airborne force. Before examining that debate, however, it will first be necessary to examine the development of the British Airborne infrastructure, in order to set out the background for that debate.

IV. Reorganising and Improvising the Infrastructure: Ringway to April 1941

The addition of a glider section further exacerbated the problems facing Louis Strange in the period mid-June to the beginning of September 1940. Nonetheless, creditable progress was made, particularly considering the handicaps under which the CLS was operating. CLS trainees had completed at least four hundred and sixty-four parachute descents by 1 September 1940,¹³² integrated into three overlapping courses of varying lengths. According to a CLS operational summary, C and D Troops took twenty days (9 – 29 July 1940) to complete one jump each, A and B Troops completed three descents each in only six days (23 – 29 July 1940). Parachute training for both courses ceased temporarily on 29 July 1940 as a result of the death of Driver Evans.¹³³ E and F Troops commenced training on 19 August 1940, and completed their course on 3 September 1940.¹³⁴

These figures and dates, however, do not tally with the daily entries in the operational record book. Jumps by A and B Troops, for example, are detailed for 10 August 1940 using the 271 Squadron Bombay, and the same course is recorded as achieving one jump each on 12 August 1940, fourteen days after the summary claims the completion of three jumps each. On the other hand, the third course commencement date of 19 August 1940 tallies with the operational records.¹³⁵ This could have been the CLS attempting to cast the best light on its activities, or just a genuine error in transcription. Given that parachute training was suspended twice in the period 22 July – 1 September 1940 following trainee fatalities and the dispute over the Whitley's suitability, paperwork errors are explicable if not excusable. The fact that Strange prided himself on being no bureaucrat might also be significant.

The CLS had also written a ten-week training syllabus by 3 September 1940, although how closely this was followed in the initial period is a matter of conjecture, and it may have actually based on experience gained from the first three courses. The first four weeks were devoted to individual training, including weapons, sabotage and map reading. Trainees then passed to the CLS for three weeks, aimed at "...training men to drop with [aircraft slung] equipment containers as a drill movement".¹³⁶ The first week was spent in ground training, followed by an aircraft jump from eight hundred feet. Week two included two more jumps, in pairs from five hundred feet. The third week's training included two more aircraft jumps with equipment and weapons containers, first in sticks of four, and then in sticks of eight. Trainees then spent a further three weeks tactical training at Tatton Park, which was to include at least one group descent. Thereafter the trainee was presumably considered a fully-fledged parachutist. From week eleven onward, provision was to be made for drops by entire Troops or more, on drop-zones other than Tatton Park.¹³⁷

Strange was also involved in initiatives to reconfigure the CLS to meet its expanded responsibilities, and to rationalise the CLS' position within the Whitehall chain of command. Strange broached the latter at the joint conference on 12 August 1940. Although not mentioned in the conference conclusions, operational records show that Strange attended the conference to discuss transferring responsibility for the CLS from the Deputy Director of Combined Operations (DDCO) to the Air Ministry's Director of Technical Organisation (DTO), and setting up separate glider and development sub-sections within the CLS.¹³⁸ Strange conferred with Keyes, at the War Office the next day, and reported back to Air-Commodore Capel at the Air Ministry.¹³⁹ Authorisation for CLS administrative control of the Glider Flight was granted on 13 August 1940.¹⁴⁰ Strange

attended another conference to discuss the expansion and subdivision of the CLS at the Air Ministry on 19 August 1940, and Capel visited Strange at Ringway, accompanied by one of Keyes' deputies, on 26 August.¹⁴¹

It is unclear if Strange's high-level lobbying was solely responsible, but the desired effect was achieved in any case. Air Vice-Marshal Blount, Air Officer Commanding (AOC) No. 22 Group, attended a conference at Ringway with Strange and Captain Lindsay, War Office GSO3, on 31 August 1940, the same day that No. 22 Group assumed total administrative control over the CLS. Lindsay was deputising for Rock, who had been hospitalised by a parachute accident on 22 August.¹⁴² It is logical to assume that the conference discussed the expansion and re-organisation of the CLS. The progress report and training syllabus, dated 1 September 1940,¹⁴³ were presumably presented to Blount when Strange and Lindsay when they visited him at No. 22 Group the same day. They appear to have been prepared for the joint conference at the Air Ministry originally scheduled for 4 September 1940.¹⁴⁴ Strange attended further discussions at the Air Ministry on 3 September 1940,¹⁴⁵ and details from the progress report were included in the Air Ministry's response to Churchill's sceptical reaction to its glider proposal.¹⁴⁶ No. 22 Group orally authorised Squadron-Leader Benham and Major Rock to assume duties as Air Staff Officers (ASOs) (Flying and Ground respectively) at the CLS on 6 September 1940,¹⁴⁷ as instructed by the joint conference which finally went ahead on 5 rather than 4 September 1940.¹⁴⁸ The conference also instructed No. 22 Group to prepare detailed proposals for subdividing the CLS,¹⁴⁹ which led to a conference at Ringway to discuss the matter on 12 September 1940.

No. 22 Group's report appeared on 6 October 1940.¹⁵⁰ The CLS was renamed the Central Landing Establishment (CLE), and added a new headquarters element and Development Unit (DU) to the existing two departments. These too were renamed, becoming the Parachute Training Squadron (PTS) and Glider Training Squadron (GTS) (see Fig. 1). This new structure was formally adopted on 1 October 1940,¹⁵¹ although Air Ministry bureaucracy took a further six days to process the changes. A meeting to assess progress was held at the Air Ministry on 18-19 October 1940,¹⁵² details of which were incorporated into a report for Churchill on 8 November 1940.¹⁵³

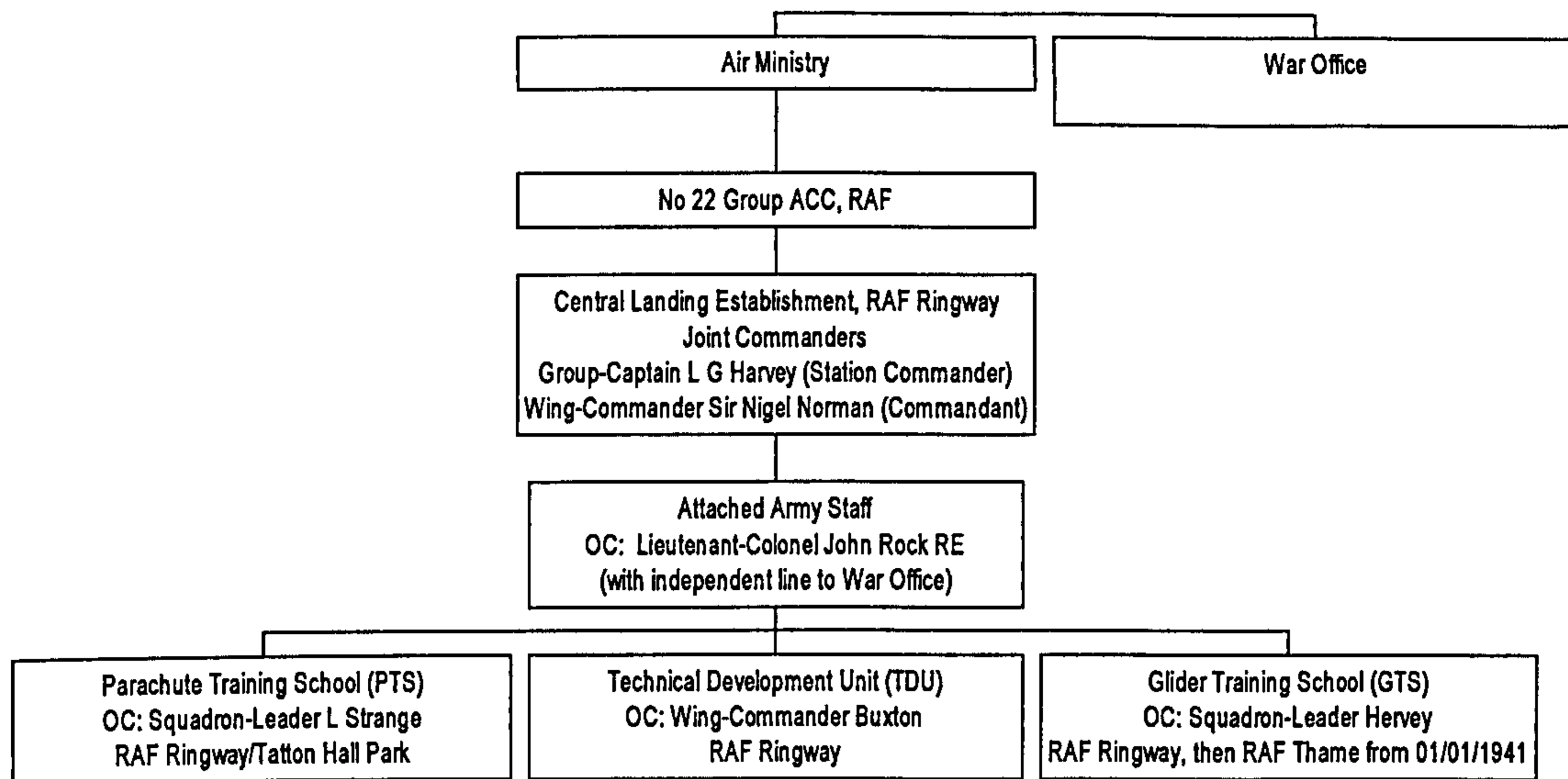


Figure 1 - Central Landing Establishment with effect from 1 October 1940

In fact, the process of change commenced at Ringway on 18 September 1940, with the arrival of Group-Captain L. G. Harvey, from the Air Ministry's Directorate of Repair and Servicing, to command the expanded venture.¹⁵⁴ This appointment was justified on the grounds that the majority of the CLE's work was technical in nature,¹⁵⁵ although politics may also have played a part in his posting in over Strange. The latter retained command of the PTS, and his cavalier attitude to bureaucratic niceties was doubtless a major factor in his sidelining. Harvey was joined by Wing-Commander Nigel Norman, who was to serve as his Senior Air Staff Officer (SASO),¹⁵⁶ alongside Rock in his capacity as attached War Office GSO1. Additional personnel to flesh out the new organisation continued to arrive into October 1940. Wing-Commander Buxton assumed command of the DU on 21 September, and Captain W. B. P. Bradish of the Royal Fusiliers arrived to act as Instructor of Infantry Tactics and liaison between the CLE and No. 2 Commando. Flying-Officer Tim Hervey MC reported to take command of the GTS on 3 October, and Squadron-Leader Maurice Newnham DFC, who was later to command the PTS, reported for administrative duties on 4 October.¹⁵⁷ A steady flow of non-commissioned specialist personnel also reported over the same period. The arrival of RAF Sergeant Page for duty as "Flight Sergeant, Disciplinary" on 23 September 1940 arguably marks the point when the CLE became properly regularised.¹⁵⁸ Harvey formally inspected his new command on 7 October 1940,¹⁵⁹ the day after 22 Group presented its expansion proposals to the Air Ministry. He had been at Ringway for almost three weeks at that point, and the delay was presumably to conceal the degree of changeover carried through without official sanction.

The re-organisation into the CLE was a positive and necessary step, especially from an administrative perspective. Being commanded by a well connected Group-Captain with a

“...wide circle of acquaintances and insinuating ways”,¹⁶⁰ rather than an abrasive and unorthodox Squadron-Leader, cannot have harmed the CLE’s prospects. That said, Harvey was present and presumably complicit in carrying through the unauthorised re-organisation, which suggests he was not averse to bending the rules himself. However, the re-organisation did little to alleviate the lack of aircraft, although the CLE again profited from Louis Strange’s efforts in other areas. For example, he obtained two surplus Whitley fuselages from the Armstrong Whitworth works at Coventry on 11 September 1940, which allowed more realistic air drill training.¹⁶¹

Strange had also gathered men with parachute expertise to the CLS. As well as co-opting volunteers from the staff at RAF Henlow, he obtained three men who had been stunt parachutists with Cobham's Flying Circus in the 1930s. Bruce Williams and Harry Ward were already serving in the RAF, the former as an Air Gunner with a Boulton Paul Defiant squadron,¹⁶² and the latter with Coastal Command. Williams was recruited by Strange personally on leaving hospital after being shot down over the English Channel,¹⁶³ while Ward emulated Strange in being directed to Ringway during a visit to the Air Ministry in early August 1940. Bill Hire was persuaded to volunteer, with the inducement of a commission, from his civilian job as a dance-hall manager.¹⁶⁴ The operational records show Williams was at Ringway by 27 July 1940, when he visited Henlow with Strange to test modified parachutes. Hire was posted to the PTS on 31 October, and Ward was serving there by 27 November.¹⁶⁵ Strange also arranged the transfer of Flight-Lieutenant Earl B. Fielden to the CLS from No. 24 Squadron on 5 August 1940.¹⁶⁶ Fielden had worked as a pilot with Cobham's Flying Circus and with Williams, Hire and Ward in the 1930s.¹⁶⁷ Williams appears to have been a particularly useful acquisition. According to Ward:

“Bruce Williams had an inventive mind, and from very limited resources he provided the apparatus for...ground training; a mock fuselage of a Whitley for practising the aircraft drills and the exit through the hole; suspended harnesses for learning the parachuting position and how to cross the liftwebs to face down the line of drift; and jump platforms for landing practice. He also introduced the 'fan' trainer for dropping troops from the rafters on the end of a wire at a reasonable rate of descent...It [the fan] was a frightening apparatus, and a useful progression toward the even greater challenge of the drop from an aircraft. Later, when more knowledge and funds became available, improvements to the 'synthetic apparatus' would be made, but it was Bruce Williams who introduced much of the kit for which others would one day be given the credit.”¹⁶⁸

However, arguably Strange’s greatest legacy to the CLE was the development of the captive balloon for parachute training. He visited the RAF Balloon Development

Establishment (BDE) at Cardington on 1 August 1940, and examined an Airship Mooring Mast and an “R” type observation balloon. Parachutes were despatched to Cardington the next day,¹⁶⁹ and successful tests with sandbags were carried out by Warrant Officer Rudland, from the Parachute Repair Section at the ominously numbered No. 13 MU at Henlow.¹⁷⁰ An order was then placed for a large passenger cage for the standard R-type balloon. Newnham claims Strange was inspired by observation balloon crewmen from the First World War, who were issued with parachutes as a means of escape in the event of attack.¹⁷¹ This is feasible, given Strange’s service in that conflict, although the use of balloons for parachute training was not entirely new. The Poles used the technique before 1939,¹⁷² and Strange may have picked up the idea from expatriate Polish personnel.¹⁷³

Harry Ward was despatched to Cardington to test the prototype cage on 27 November 1940.¹⁷⁴ He was favourably impressed:

“[it was a]...lovely sensation! Real fair-ground stuff...No slipstream to cause malfunctions. Less chance of twisted [rigging] lines. Less likelihood of bloody noses from 'ringing the bell'. Better observation of pupils' performance. Definitely a winner.”¹⁷⁵

The major difference between a balloon and aircraft jump was that the parachutist fell approximately two hundred feet in dead air before his canopy deployed. The Air Ministry claimed this four second free-fall produced “...an additional thrill”,¹⁷⁶ although whether the author actually experienced the thrill is open to conjecture. Air Ministry enthusiasm was doubtless enhanced by the prospect of balloons reducing the CLE’s aircraft requirements. The balloon proved to be a very useful training tool that allowed instructors to call instructions to trainees during their descent. It was not universally popular, however. Ward claimed that a parachute-qualified Army captain who tested the prototype cage with him on 27 November 1940 “...insisted that jumping from a balloon was the most terrifying thing he had ever done”.¹⁷⁷ Williams shared this opinion when he jumped from the first operational training balloon on 8 April 1941.¹⁷⁸ This was located at Tatton Park, but only after a two-month wrangle between a variety of agencies including Lord Egerton, various Air Ministry departments, the Ministry of Works and the Cheshire War Agriculture Executive Committee.¹⁷⁹ Typically, Williams’ descent preceded official Air Ministry approval for using Tatton for balloon jumping by eight days, and occurred four days before the local Works department received permission to construct a balloon installation.¹⁸⁰

This suggests that bureaucracy was responsible for the four-month delay between the balloon test and its operational debut. Newnham cites a shortage of materials, due to

priority barrage-balloon production, as being the culprit.¹⁸¹ Williams had previously advocated constructing a Soviet-style parachuting tower, but the Air Ministry initially demurred due to the cost, after an engineering firm quoted £30,000 for a three hundred and fifty-foot tower.¹⁸² In the event, balloon jumping became an integral part of British military parachute training until the early 1990s.¹⁸³

Improvisation also played an important part in allowing the GTS and DU to perform research and development work for future reference. Four sport gliders were despatched from Ringway to Tatton Park to assess the viability of accurate moonlight landing on the night of 29-30 September.¹⁸⁴ A daylight test a week later proved the feasibility of towing two gliders simultaneously and that the latter were capable of locating and landing on target from a range of fourteen-mile flight.¹⁸⁵ The DU also discovered that gliders could not be launched "hands off" when a Minimoa sport glider overtook its tug during take-off on 14 October 1940.¹⁸⁶ DU operational records make an enigmatic reference to "six troop carrying gliders" being present at Ringway at the end of October 1940.¹⁸⁷ What these were is a mystery, for the prototype eight-seat Hotspur made its maiden flight on 5 November 1940,¹⁸⁸ and operational records show that the first production Hotspur did not fly at the CLE until 21 January 1940.¹⁸⁹

GTS gliders took part in a series of "Operational Exercises" for the DU, starting with a two-glider demonstration for the Duke of Kent at Tatton Park on 26 September 1940. The fifth exercise, carried out on 26 October 1940, involved landing two gliders alongside a rail viaduct near Macclesfield, Cheshire, in a mock sabotage attack for the benefit of War Office observers.¹⁹⁰ Some of these involved gliders and paratroops, such as that carried out for CIGS Sir John Dill and other Air Ministry and War Office representatives on 13 December 1940. Five sport gliders represented the yet-to-arrive Hotspurs, and two Whitleys dropped two sticks of eight fully equipped paratroops. The objective was a mock ammunition dump at Tatton Park. All landings were completed within a two hundred yard radius in under a minute. The "...CIGS was very impressed".¹⁹¹

Such spectacular demonstrations were the exception rather than the rule, for the bulk of the DU's work was more prosaic. Corporal Carter of No. 2 Commando was killed on 19 November 1940,¹⁹² when the snap-hook connecting his parachute to the strop snagged open on the coaming around the Whitley's aperture. This disconnected the parachute from the static-line, which meant it could not open. The DU began an investigation immediately, and by 27 November 1940 a locking safety pin for the snap hook had been designed, tested and released by the DU for general use.¹⁹³ It was officially accepted by

the CLE three days later.¹⁹⁴ Other work included experimenting with methods of dropping containers, the results of which were passed to Armstrong Whitworth for further development,¹⁹⁵ testing and fitting tail-wheel spats to the CLE's Whitleys to prevent parachutes fouling them,¹⁹⁶ and building wooden mock-ups of seats for Whitley passengers. The latter were found unsatisfactory, presumably due to the cramped confines of the Whitley's fuselage, and issue mattresses were used instead.¹⁹⁷

Similar innovations were created for the GTS. These included the "sector light" for night towing, tested on 6 November 1940. It consisted of a lamp with three shrouded filters, fitted to the tail of the tow aircraft. A red light warned the glider pilot that he was flying higher than the tug, amber too low, and green indicated the glider was correctly aligned.¹⁹⁸ The device worked, but cloud limited its usefulness. An electrical device that indicated the "angle of the dangle" between glider and tug superseded it, allegedly suggested by an unnamed Australian sport glider pilot serving at Ringway.¹⁹⁹ Drawings were approved on 12 December 1940, and successful tests were carried out on following consecutive nights.²⁰⁰ Even basic parameters had to be ascertained, such as the optimum length for towlines. If the line were too long, the glider remained on the ground after the tug was airborne, and if too short it became airborne before the tug, with equally dangerous results.²⁰¹ All manner of temporary expedients were tried, tested and discarded or not. These including using Swallow light aircraft with their propellers removed as makeshift gliders, with co-opted ground crew serving as rear counter-weights. The views of the latter can be well imagined.²⁰² Other work included the development of a standardised "glider-patter", and the creation of "...new if unauthorised trades and duties for gliding...with carefully defined duties and methodology".²⁰³ The GTS also wrote a detailed ground training syllabus, which was updated to reflect experience. Wright refers to the inclusion of air photograph interpretation training, when these proved more useful than maps.²⁰⁴

The down side of this trial and error approach was that a considerable amount of time and effort was wasted on projects that turned out to be blind alleys. The Rotachute, for example, was the invention of a German national called Hafner. This was suggested as a substitute for parachutes *and* gliders at the joint conference on 5 September 1940.²⁰⁵ The device consisted of "...a man sitting in a cradle suspended from a propeller, which resembled and acted in a similar manner to a falling leaf".²⁰⁶ The 5 September conference authorised further investigation, whilst noting reservations from the Assistant Chief of Air Staff (Technical). Hafner was at that time interned as an enemy alien, but a model Rotachute was dropped from a CLE Tiger Moth aircraft on 5 November 1940.²⁰⁷ A further model, with a three-foot rotor span and weighing four and a half pounds was tested on 11

November, and a full scale example weighing three hundred pounds was ready for test dropping from a balloon the same day.²⁰⁸ Detailed drawings for a model with a ten-foot span were completed on 24 November,²⁰⁹ and a successfully test carried out at Tatton on 14 and 18 March 1941.²¹⁰ The attraction for the Air Ministry presumably lay in the Rotachute's propeller, which would allow it to be classified as an aircraft, and would therefore place it, and the personnel who used it, firmly within their jurisdiction.

Similar effort was expended in investigating the use of gliders for parachuting, partly to augment the carrying capacity of parachute aircraft during operations, and to circumvent the shortage of training aircraft. Flight-Lieutenant Hodges at the CLE mooted the idea on 12 September 1940, and recommended that doors be included in the design of the forty-seat glider then under consideration.²¹¹ No. 22 Group passed the idea back to the CLE for further consideration on 19 September 1940,²¹² and to the Air Ministry on the same day.²¹³ It was also passed to Combined Operations and the War Office.²¹⁴ The result was the Airspeed Horsa glider, which Otway claims was designed specifically for parachuting. The design had doors on either side of the fuselage to allow simultaneous exits, a means for despatching supply panniers from within the craft, and six under-wing cells with remote release mechanisms for supply containers. Despite all this design and production effort, however, the idea had been rendered unnecessary by the time production Horsas appeared in June 1942.²¹⁵

The GTS was hampered by the lack of suitable gliders, but there was no lack of pilots. The GTS inherited the services of military personnel with civilian glider experience from the CLS, in much the same way as the PTS profited from the experience of Williams, Hire and Ward. The GTS's commander, Squadron-Leader Tim Hervey, had been chief instructor at the Dunstable Gliding Club in the 1930s, while Squadron's chief instructor, John Saffrey, had fulfilled a similar role at the London Glider Club.²¹⁶ The second major problem was therefore the shortage of facilities. The GTS placed a minimal strain on the CLE's aircraft, but it nonetheless occupied scarce accommodation at Ringway, not least because its gliders required weatherproof storage. According to Newnham, the DU and aircraft maintenance accounted for one of the CLE's allotted hangars, and the PTS had the other, although maintenance on the Establishment's well-worn Whitleys often spilled over into both.²¹⁷ The GTS practice of using motor cars to launch gliders was also a hazard on an operational airfield. The obvious solution was to re-locate the GTS to a dedicated airfield of its own, but this proved more easily said than done.

Air Marshal Hollinghurst raised the matter with the Air Ministry in a letter on 8 October 1941, in which he outlined the problems faced by the GTS at Ringway and requested an alternative location.²¹⁸ The Air Ministry allocated it airfields at Ratcliffe and Rearsby, although these had been earmarked as bombing ranges. Bomber Command was informed on 12 October 1940,²¹⁹ and promptly lodged a strong protest on 23 October 1940.²²⁰ The CLE was informed on 16 October,²²¹ and Newnham and Hervey visited them on 18 October 1940.²²² However, the Ministry of Aircraft Production, which was disinclined to move out for the GTS or Bomber Command, already occupied both locations.²²³

The CLE located another suitable airfield at Side Hill near Newmarket, which was inspected by Wing-Commander Norman on 8 November 1940, and by Newnham, Hervey and others on 13 November.²²⁴ A detailed survey of the area confirmed its suitability,²²⁵ which was relayed to the Air Ministry on 18 November,²²⁶ although operational records show that permission to use the new site had been granted the day before.²²⁷ The CLE issued a movement order on 20 November 1940, an advance party was despatched on 21 November, and all flying at the CLE was suspended on 22 November to allow equipment and personnel to be prepared for the move.²²⁸ Things then went awry. The transfer was suspended on 24 November 1940, following objections from Bomber Command and the Jockey Club, and the advance party was recalled to Ringway on 6 December 1940.²²⁹ According to Wright, Side Hill was an emergency Bomber Command landing site “in [operational] bomber territory”, but the squadrons that used it were unconcerned by the presence of the GTS. The objections thus presumably originated at a higher level.²³⁰

Hervey began a survey of other suitable locations on 5 December 1940,²³¹ and reported his findings on 12 December, having located seven possible sites.²³² An Air Ministry conference on 11 December 1940 narrowed the choice to an unfinished airfield at Shobden, or Haddenham near Thame. The latter was the CLE’s preferred option,²³³ and the Air Ministry authorised the GTS to relocate to Haddenham on 20 December 1940. The CLE issued a movement order ten days later, and another advance party left Ringway for Haddenham on 31 December.²³⁴

The GTS’s new home was littered with wheel-less cars as an anti-invasion measure, and lacked a surfaced access road and accommodation for aircraft or personnel. The obstructions were cleared on 1 January 1941 for the GTS’s powered aircraft, whilst the gliders were transported by road.²³⁵ Orders for the necessary work and equipment had been issued to the local works and other departments in December 1940. These included the erection of twelve-bay Bessoneau-type hangars,²³⁶ which began on 2 January.²³⁷

Personnel accommodation had to be obtained locally. Other ranks were housed in a barn leased from a Mr Purser for three pounds per week plus rates, and officers in a large adjacent house owned by a Colonel Sedgewick. Suitable terms were presumably agreed, given that powers to requisition the Colonel's property were not invoked.²³⁸ The GTS was thus firmly ensconced in its new home, and commenced flying gliders on 3 January 1940, although it was not authorised to do so until 5 January.²³⁹ By that time over thirteen hours of glider flying time had been logged.²⁴⁰ The GTS therefore faced the New Year with the location, if not the means, to carry out its brief of training glider pilots.²⁴¹ Whilst waiting for new trainees to arrive, GTS gliders participated in trials at the Air Fighting Development Unit (AFDU) Duxford, to determine glider vulnerability to fighter attack.²⁴² March 1941 saw the GTS mark up two notable firsts. Corporal Weston was responsible for the first "prang" in the history of Army gliding, when he crashed a Kite glider through the roof of the Sergeants' Mess,²⁴³ and Sergeant Strathdee became the first Army glider pilot to fly solo.²⁴⁴ In April 1941 the GTS received its first eight-seat Hotspur glider,²⁴⁵ was renamed No. 1 Glider Training School, and its home airfield was re-designated RAF Thame.²⁴⁶

V. From Training to Demonstrations and Operations: The CLE and 11 Special Air Service Battalion to April 1941

By April 1941, the airborne project had made significant progress, particularly given the prevailing conditions. In some instances, existing problems were exacerbated by additional factors outside Ringway's control. On 2 October 1940, for example, a consignment of faulty Whitley under-carriage jacks rendered all the Establishment's parachuting aircraft unserviceable for nine days.²⁴⁷ In addition, German bombs intended for Manchester hit Ringway on the night of 22-23 December. One struck Hangar No. 5 and damaged an unspecified DU aircraft and several others.²⁴⁸ However, even allowing for such mishaps, the degree of progress could arguably have been greater had the CLE not been obliged to provide parachute personnel and equipment for testing and demonstration purposes in addition to training.

For example, No. 2 Commando maintained a detachment of parachute-trained men on standby for this 10 September 1940,²⁴⁹ and the DU began a series of operational exercises from 26 September 1940. Within a month these activities expanded to include mock assaults for high-ranking observers, such as that at Macclesfield on 26 October 1940.²⁵⁰ On 3 December 1940, thirty-two paratroopers participated in an exercise on Salisbury Plain at the express request of Montgomery. In the process they commandeered Crown

Prince Olaf of Norway's car to attain their objective. The Prince was so impressed by this graphic display of "Airborne Initiative" that "...he treated the paratroopers to a round of beers when he was eventually reunited with his vehicle outside a pub in Shrewton".²⁵¹ Other such activities included the combined parachute and glider assault before the CIGS at Tatton Park on 13 December 1940,²⁵² and exercise Dragon at Camberley in Surrey on 6 January 1941, which was attended by the CinC Home forces.²⁵³ A similar exercise was held on Salisbury Plain on 19 February 1941, for Dill and Alan Brooke.²⁵⁴

These demonstrations were necessary to maintain a high profile for the airborne idea, but they disrupted unit-based training, and therefore impeded 11 Special Air Service (SAS) Battalion, as No. 2 Commando was renamed on 21 November 1940,²⁵⁵ in achieving full operational status. This is largely why it took until 24 December 1940 for all members of No. 11 SAS Battalion to complete basic parachute training. There then remained advanced group parachute training, which was scheduled for completion by February 1941.²⁵⁶ The problem was exacerbated by the fact that some Commando volunteers required instruction in basic infantry skills, which explains Rock's recommendation that fighting airborne troops be drawn exclusively from the infantry.²⁵⁷ According to Otway, it actually took five months to train one hundred and seventy-six men to a level corresponding with "section training in an infantry battalion".²⁵⁸

In addition to all this, 11 SAS Battalion was in a state of organisational flux for much of the time. The one hundred and seventy-six volunteers were originally organised to operate in Commando sections of ten, but were re-organised into sections of eight after their arrival at Ringway, possibly to suit the capacity of the projected Hotspur glider. In December 1940 they were re-organised back into sections of ten, to reflect the supposed capacity of the Whitley. It should be noted, however, that the Whitleys involved in the Tragino raid in February 1941 carried sticks of six, presumably because of the additional weight of the arms and equipment.²⁵⁹ Some small-unit experience was gained through the employment of 11 SAS Battalion for demonstrations and as an exercise enemy for conventional troops training to repel a German airborne assault. This was by osmosis rather than design, and therefore to a lower standard than more systematic training would have allowed.

Arguably the most disruptive activity undertaken by the CLE and 11 SAS Battalion was also the most spectacular. Operation Colossus, carried out in February 1941, was the first British parachute operation in history.²⁶⁰ It also absorbed the majority of the CLS's resources for the better part of a month.²⁶¹ The timing of the operation was not accidental, for December 1940-January 1941 marked an increase in Army-RAF acrimony over the

future of the airborne project.²⁶² This, with the gloomy strategic background, supports the popular view that the operation's motive was twofold. First, a successful airborne operation would demonstrate that the new British airborne force merited further development. The fact that the CLE's commander personally oversaw the operation from its mounting-base in Malta, and flew on one of the aircraft involved illustrates the importance attached to the venture by Ringway.²⁶³ Secondly, a successful operation would provide a valuable propaganda victory, to prove that Britain remained a force to be reckoned with.²⁶⁴

The target of the operation was the Tragino Aqueduct in Southern Italy, originally brought to the attention of the Air Ministry as a potential bomber target by the British civil engineering firm involved in its construction. It was assumed that destruction of the aqueduct would disrupt the supply of drinking water to the province of Apulia, which included the ports of Bari, Brindisi and Taranto. This lent the venture a strategic as well as propaganda dimension, for those ports were staging points for the supply and reinforcement of Italian forces in Albania and North Africa. Air Ministry planning for a bombing attack began on 5 December 1940,²⁶⁵ but the target was subsequently deemed unsuitable and passed to Combined Operations, who decided upon an airborne operation because the distance between the coast and the target precluded an amphibious insertion. The operation was approved on 11 January 1941.²⁶⁶ On 13 January PTS staff made night jumps over Ringway to test both the concept and new lights to aid rallying in the dark.²⁶⁷ The whole of 11 SAS Battalion volunteered *en masse*, and thirty-nine were selected, including seven officers and three interpreters, two of whom were of Italian origin. Code named "X" Troop, this group began intensive training, and moonlight drops by sticks of the volunteers began on 14 January 1941.²⁶⁸ A scale model of the target was housed in Harvey's office, and a full size mock-up was constructed at Tatton Hall Park for training. The training was hazardous in itself. Lance-Sergeant Dennis drowned on the night of 22 January 1940 when high winds blew him into the lake at Tatton Park,²⁶⁹ and several volunteers became hung-up in trees there from the same hazard on 1 February, necessitating intervention by Knutsford Fire Brigade.²⁷⁰ As Ward later commented, "...January was not a good time for training paratroops".²⁷¹ Nonetheless, X Troop left RAF Mildenhall for Malta on 7 February 1941,²⁷² and the operation was launched on the night of 10/11 February.

The plan was to drop the paratroops within striking distance of the target, which would be demolished. X Troop would then withdraw to the coast for extraction by submarine on the night of 15/16 February 1941. However, things did not go as planned. The aqueduct was

demolished, but the projected disruption to drinking water supplies did not materialise, and the entire force was captured traversing the sixty mountainous miles to the extraction point. This spared them the disappointment of discovering that the Admiralty had ordered their extraction submarine to abandon the rendezvous,²⁷³ which led to allegations that the raiders were written off by the planners from the start.²⁷⁴ Strictly speaking, Operation Colossus was therefore a failure. On the other hand, it caused “alarm and consternation...across the whole of Italy”, and prompted “stringent air-raid and anti-parachute precautions”.²⁷⁵ This partly fulfilled the raid’s strategic brief, because it diverted Italian troops away from operations in Albania and North Africa. The operation's secondary aim, of demonstrating that Britain at bay was still a force to be reckoned with, was therefore also achieved.

The raid also profited the CLE and 11 SAS Battalion, because it proved the feasibility of airborne operations, and provided valuable operational experience. The latter highlighted the need for more detailed and up to date aerial photography. The day before the raid it was discovered that there were in fact two aqueducts, necessitating last minute adjustments to the plan, and when the raiders reached the objective, they discovered that the target’s supporting pillars were constructed of brick rather than concrete, which obliged further last-minute improvisation. The raid also showed that night dropping techniques required further refinement, and uncovered undetected equipment problems. An electrical fault in the release mechanism resulted in some containers failing to drop, and preparations showed that the existing soft containers were unsatisfactory. When fully loaded these “...sagged so much that the bomb doors could not be closed...[and]...metal containers manufactured especially for this operation provided the pattern for containers used in the later stages of the war”.²⁷⁶

The Tragino operation also provided welcome publicity for the new airborne arm, which was experiencing difficulty in attracting sufficient new volunteers, and retaining those it already had. The story of the raid was the first public disclosure that Britain possessed an airborne capability. Italian reporting of the raid was widely quoted by the British press,²⁷⁷ and interest in the story was heightened by the subsequent execution of one of X Troop’s interpreters, following his identification as an Italian national.²⁷⁸ On the other hand, there were also some unwelcome results. Bruce Williams, who accompanied the raiders as a despatcher,²⁷⁹ was charged with "unlawful disclosure of classified information" to a British reporter on his return, and court-martialled.²⁸⁰ His removal may have been due to internal CLE politics, a possibility discussed in more detail below.

Operation Colossus showed that the labours of the personnel at Ringway had not been in vain. By April 1941, the CLE had been re-organised into a structure capable of at least addressing its expanded brief to train a British airborne force. The CLE was functioning properly as a co-ordinating centre, its in-house R&D centre was providing solutions to problems as they occurred, and its parachuting and gliding wings were established and functioning in their own dedicated locations. That, arguably, was as much as could be expected without additional support and guidance from above. Unfortunately, the latter were not immediately forthcoming, because the background to the CLE's development had been a growing divergence of opinion between the War Office and Air Ministry regarding the role, size and composition of the new airborne arm. There could be no further progress until this divergence was rectified.

Notes

- ¹ PRO AIR 29/512, CLE Operational Record Book (ORB), entries for 10, 12 & 17/07/1940
- ² *ibid.*, CLE ORB, entry for 13/07/1940
- ³ *ibid.*, CLE ORB, entries for 14, 15 & 16/07/1940
- ⁴ *ibid.*, CLE ORB, entry for 22/07/1940
- ⁵ *ibid.*, CLE ORB, entry for 17/07/1940
- ⁶ *ibid.*, CLE ORB, entry for 25/05/1940
- ⁷ for specific mention of the strap being tape rather than the later canvas webbing, see Otway, *op cit.*, p. 29
- ⁸ for details of Irvin parachute opening sequence and the problems which led to the death of Driver Evans, see Otway, Appendix C, "The Parachute", pp. 403-404; and Peter Hearn, *Sky High Irvin*, p. 156
- ⁹ Newnham, *op cit.*, pp. 119-120
- ¹⁰ see for example L. Minov, "Obuchenie Parashiutnim Prizhkam" (loosely "Training in Parachute Jumps"), *Vestnik Vozdushnovo Flota*, No. 2, 1931 (Russian Language publication), pp. 19-23. I am indebted to Mr James Sterrett for drawing my attention to and translating this article
- ¹¹ Devlin, *op cit.*, pp. 45-46
- ¹² Max Arthur, *Men of the Red Beret*, pp. 320-321
- ¹³ PRO AIR 29/512, CLE ORB, entry for 26/07/1940
- ¹⁴ *ibid.*, CLE ORB, entry for 29/07/1940
- ¹⁵ *ibid.*, CLE ORB, entry for 26/07/1940
- ¹⁶ *ibid.*, CLE ORB, entry for 27/07/1940
- ¹⁷ Hearn (*Sky High Irvin*), p. 156
- ¹⁸ PRO AIR 29/512, CLE ORB, entry for 30/07/1940
- ¹⁹ Hearn (*Sky High Irvin*), p. 156

-
- ²⁰ quoted from Otway, p. 403; see also Hearn (Sky High Irvin), p. 156
- ²¹ Hearn (Sky High Irvin), p. 157
- ²² PRO AIR 29/512, CLE ORB, entry for 30/07/1940
- ²³ *ibid.*, CLE ORB, entry for 31/07/1940
- ²⁴ *ibid.*, CLE ORB, entry for 07/08/1940
- ²⁵ Hearn (Sky High Irvin), pp. 156-157
- ²⁶ PRO AIR 29/512, CLE ORB, entry for 23/07/1940
- ²⁷ *ibid.*, CLE ORB, entries for 27 & 30/07/1940
- ²⁸ *ibid.*, CLE ORB, entry for 27/08/1940
- ²⁹ Hearn (Sky High Irvin), p. 156
- ³⁰ see for example Otway, pp. 29, 403; Newnham, pp. 17-18; Hearn (Sky High Irvin), p. 156; and Harry Ward with Peter Hearn, *The Yorkshire Birdman*, p. 144
- ³¹ PRO AIR 2/7239, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions of Conference Held at the Air Ministry June 10, 1940", dated 10/06/1940
- ³² Otway, p. 29
- ³³ PRO AIR 2/7239, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions of Conference Held at the Air Ministry June 10, 1940", dated 10/06/1940
- ³⁴ according to his biographer, Strange arranged for a demonstration drop from a KLM DC 3 at Ringway for Keyes, through the chief KLM pilot who was a personal friend; see Hearn (Flying Rebel), p. 119
- ³⁵ PRO CAB 120/262, doc. 3, letter from Keyes to PM, dated 27/07/1940
- ³⁶ *ibid.*, doc. 4, letter from Sir Arthur Street (AM) to Ismay, dated 02/08/1940
- ³⁷ *ibid.*, doc. 5, note from Street to Ismay, dated 03/08/1940
- ³⁸ *ibid.*, doc. 6, letter to Ismay, dated 05/08/1940
- ³⁹ "Frobisher" was the name given to the first example of the De Havilland D.H. 91 Albatross, which constituted the "F Series" of Imperial Airways four-engine airliners in the late 1930s. The naming individual aircraft was not uncommon at that time. Only seven were built; four were destroyed in crashes, Frobisher was destroyed by enemy action, and the remaining two were scrapped; see A. S. Jackson, *De Havilland Aircraft*, pp. 380-384; I am indebted to Mr Simon Moody, Department of Research at the Royal Air Force Museum, Hendon, for providing this information
- ⁴⁰ PRO CAB 120/262, doc. 8, letter from Ismay to van Kleffens, dated 09/08/1940
- ⁴¹ PRO CAB 120/262, doc. 11, letter from van Kleffens to Ismay, dated 12/08/1940
- ⁴² PRO AIR 2/7338, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachute Training", dated 12/08/1940
- ⁴³ PRO CAB 120/262, doc. 9, letter from PM to Ismay, dated 10/08/1940
- ⁴⁴ *ibid.*, doc. 10, memo from Ismay to PM, dated 10/08/1940
- ⁴⁵ the paper can be dated approximately to August 1940 on strength of its contents; see PRO AIR 2/7338, doc. 11A, paper "Development of Parachute Troops", n.d., c.08/1940
- ⁴⁶ Thetford, *op cit.*, p. 28

-
- ⁴⁷ Newnham, p. 21
- ⁴⁸ *ibid.*, p. 22
- ⁴⁹ Ward, p. 146
- ⁵⁰ for the first verse, Cholewczynski, *op cit.*, p. 55
- ⁵¹ PRO AIR 29/512, CLE ORB, entry for 31/07/1940; and Newnham, p. 18
- ⁵² Newnham, pp. 18-19. Curiously, the actual incident is not recorded in the CLE ORB, although the entry for 5 August refers to the arrival of an RAF officer at Ringway to investigate a statichute fouling a tail wheel; see PRO AIR 29/512, CLS ORB, entry for 05/08/1940; for results of the investigation, see *ibid.*, entry for 06/08/1940
- ⁵³ PRO AIR 29/512, CLS ORB, entry for 27/09/1940
- ⁵⁴ *ibid.*, CLE ORB, entry for 07/08/1940
- ⁵⁵ Newnham, p. 19
- ⁵⁶ PRO AIR 29/512, CLE ORB, entry for 08/08/1940
- ⁵⁷ PRO AIR 2/7338, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachute Training", dated 12/08/1940
- ⁵⁸ *ibid.*, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachute Training", paragraph 5, dated 12/08/1940
- ⁵⁹ Newnham, pp. 19-21
- ⁶⁰ PRO AIR 29/512, CLE ORB, entry for 15/08/1940
- ⁶¹ PRO AIR 2/7239, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions to Conference Held at the Air Ministry June 10 1940", dated 10/06/1940
- ⁶² *ibid.*, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions to Conference Held at the Air Ministry June 10 1940", dated 10/06/1940
- ⁶³ for details of the Flamingo, see Thetford, p. 584
- ⁶⁴ and these were apparently earmarked for despatch to the Middle East; see Francis K. Mason, **The British Bomber Since 1914**, p. 301
- ⁶⁵ Otway, p.
- ⁶⁶ Newnham, pp. 19-20
- ⁶⁷ for details of the Stirling, see Thetford, pp. 459-462
- ⁶⁸ James Sims, **Arnhem Spearhead**, pp. 16-19
- ⁶⁹ PRO AIR 2/4586, doc. 57B, letter/report from Air Marshal Barratt, OC ACC to Air Ministry, dated 28/04/1941. The Stirling examination is dated 01/01/1941; other aircraft examined were the Avro Manchester and Lancaster, and Handley Page Halifax
- ⁷⁰ PRO AIR 32/3, doc. 2B, report "Note on Unofficial Visit by AOC and McPherson to Hatfield to Inspect The Hertfordshire", dated 05/04/1940
- ⁷¹ for line drawing, see Jackson, p. 384
- ⁷² other RAF types to use the Pegasus included the Handley Page Harrow and Hampden, and Vickers Wellesley and Wellington; see Thetford, manufacturer-specific entries

-
- ⁷³ Bombays serving in the Middle East from September 1939 were used as night bombers and retained their armament. Only fifty Bombays were produced, so if the Air Ministry figure of 21 in the UK is accurate, only half were deployed overseas; see Thetford, pp. 136-137
- ⁷⁴ Newnham, p. 27; for a detailed account of the raid, see Karel Margry, "Tragino 1941: Britain's First Paratroop Raid", *After the Battle* (No. 81, 1993), pp. 8-29
- ⁷⁵ Thetford, p. 136
- ⁷⁶ PRO AIR 29/512, CLE ORB, entry for
- ⁷⁷ quoted from interview with Sergeant Lawley, No. 2 Commando; cited in Thompson, *op cit.*, pp. 9-10
- ⁷⁸ PRO AIR 29/512, CLE ORB, entry for 12/08/1940
- ⁷⁹ *ibid.*, CLE ORB, entries for 13/08/1940 & 14/08/1940
- ⁸⁰ *ibid.*, entry for 09/08/1940
- ⁸¹ I am again indebted to Mr Simon Moody, Department of Research and Information services at the RAF Museum, Hendon, for guiding me to the references for the Harrow
- ⁸² C. H. Barnes, *Handley Page Aircraft Since 1907*, pp. 372-375
- ⁸³ Mason, p. 301
- ⁸⁴ Barnes, p. 378; and Mason, pp. 301-302
- ⁸⁵ this figure is reached by subtracting the Harrow's empty weight of 13,600 lb. from its gross loaded weight of 23,000 lb.; figures quoted in Thetford, p. 311
- ⁸⁶ for a clear illustration, see Thetford, lower plate, p. 312
- ⁸⁷ the Harrow was equipped with gun turrets for its bombing role, and whilst some of these were faired over during conversion for the transport role, this was not universal and some Sparrows retained the turret cupolas; presumably it would therefore have been a relatively simple matter to re-equip the faired over examples too; see Barnes, p. 378
- ⁸⁸ the Harrow's maximum speed was in the region of two hundred m.p.h., around thirty m.p.h. less than the Whitley; for Harrow details see Thetford, p. 311; for the Whitley, see Otway, Appendix "B", p. 402
- ⁸⁹ Barnes, p. 378
- ⁹⁰ Mason, p. 302; and Thetford, p. 312
- ⁹¹ Barnes, p. 379
- ⁹² PRO CAB 120/262, doc. 6, letter to Ismay, dated 05/08/1940
- ⁹³ PRO AIR 2/7239, doc. 1B, "Development of Parachute Troops" from AM Dept. of Plans to various AM departments, dated 08/06/1940; and doc. 2A, minutes of conference held at the Air Ministry, dated 10/06/1940
- ⁹⁴ *ibid.*, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions to Conference Held at the Air Ministry June 10 1940", dated 10/06/1940
- ⁹⁵ quotes from PRO AIR 2/7338, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachute Training", dated 12/08/1940
- ⁹⁶ *ibid.*, doc. 2A, "Note on the Employment of Parachute Troops", dated 31/08/1940
- ⁹⁷ see for example PRO AIR 2/7206, "Counter-measures Against Possible Enemy Parachute Attack", dated 1940; AIR 20/296, Chiefs of Staff Report (40)432 (JIC), dated 06/06/1940; and AIR 40/1637, Combined

Intelligence Chiefs Report No. 18, dated 17/06/1940; the latter two are cited in John P. Campbell, "Facing the German Airborne Threat to the United Kingdom, 1939-1942", **War In History**, Volume 4, No.4 (1997)

⁹⁸ PRO AIR 29/512, CLE ORB, entry for 02/08/1940

⁹⁹ *ibid.*, entry for 07/08/1940

¹⁰⁰ see Wright, *op cit.*, p. 16

¹⁰¹ Hearn (Flying Rebel), pp. 118-119; and PRO File AIR 29/512, CLE ORB, entry for 03/08/1940

¹⁰² quoted from Hearn (Flying Rebel), p. 119

¹⁰³ PRO AIR 29/512, CLE ORB, entry for 09/08/1940

¹⁰⁴ *ibid.*, CLE ORB, entry for 11/08/1940

¹⁰⁵ *ibid.*, CLE ORB, entry for 13/08/1940

¹⁰⁶ *ibid.*, CLE ORB, entry for 23/08/1940

¹⁰⁷ Otway, Appendix "A", "The Glider", p. 390; Wright makes the same claim in his participant account; see Wright, p. 14

¹⁰⁸ Thetford, p. 621

¹⁰⁹ in its original format, 1st Airborne Division fielded three Parachute brigades and one Airlanding brigade, each of three infantry battalions. This was later reduced to two Parachute and one Airlanding brigade, the organisation used by 6th Airborne Division in Normandy in 1944 and at the Rhine Crossings in 1945, and by 1st Airborne Division at Arnhem; see Otway, Appendix "O", "Orders of Battle", pp. 438-445

¹¹⁰ Thetford, pp. 620, 622-623; and Otway, Appendix "A", "The Glider", pp. 390-397

¹¹¹ see Wright, p. 45; for details of the Vermork raid, see Otway, pp. 70-73; and Richard Wiggan, **Operation Freshman: The Rjukan Heavy Water Raid 1942**

¹¹² PRO AIR 29/512, CLE ORB, entry for 07/08/1940

¹¹³ for details see Wright, p. 16

¹¹⁴ operational records merely record when these aircraft arrived at the CLS, and not their intended purpose; see PRO AIR 29/512, CLE ORB, entries for 09/08/1940 & 10/08/1940

¹¹⁵ Wright, p. 12

¹¹⁶ PRO AIR 29/512, CLE ORB, entry for 30/11/1940

¹¹⁷ Wright, p. 13; according to the operational records, there was a Wellesley airframe at the CLS in October 1940, although it is unclear if it was used as a glider; see PRO AIR 29/512, CLE ORB, "Appendix A", following entry for 31/10/1940

¹¹⁸ quoted from Wright, p. 15

¹¹⁹ Wright, p. 14

¹²⁰ PRO AIR 2/7239, doc. 4A, "Development of Para Troops [sic] - Air Requirements: Conclusions to Conference Held at the Air Ministry June 10 1940", dated 10/06/1940

¹²¹ PRO AIR 2/7338, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachute Training", closing paragraph, dated 12/08/1940

¹²² the glider used by the Germans at Eben Emael was the eight-seat DFS 230, which cannot be classified as large; see Lucas (Storming Eagles) *op. cit.*, p. 370

-
- ¹²³ PRO AIR 2/7338, doc. 01B, extract from Chiefs of Staff Meeting on 6 August 1940, dated 06/08/1940; for the minutes in full, see PRO CAB 120/262, doc. 7, "Conference Minutes: Meeting of War Cabinet Chiefs of Staff Committee on 6 August 1940 at 10.30 a.m. Re: Raiding Policy", dated 06/08/1940
- ¹²⁴ PRO CAB 120/262, letter from PM to Ismay, dated 10/08/1940
- ¹²⁵ *ibid.*, letter from DCO Keyes to PM, dated 24/08/1940
- ¹²⁶ PRO AIR 2/7338, minute from Ismay to PM, dated 31/08/1940
- ¹²⁷ PRO CAB 120/262, doc. 19, letter from PM to Ismay, dated 01/09/1940; Martin Gilbert also cites this document, but without clearly acknowledging its significance, and attached to a highly inaccurate footnote regarding the development and employment of British military gliders; see Gilbert (Churchill War Papers; Volume II), *op cit.*, p. 755
- ¹²⁸ PRO AIR 2/7338, doc. 4B, letter from Ismay to CAS, dated 02/09/1940
- ¹²⁹ *ibid.*, doc. 4A, letter from VCAS to AM Dept. Plans, dated 03/09/1940
- ¹³⁰ PRO CAB 120/262, doc. 21, letter from VCAS to Ismay, dated 05/09/1940
- ¹³¹ quoted from the Colville Papers, diary entry for 27 June 1940; cited in Gilbert (Churchill War Papers Vol. II), p. 426
- ¹³² PRO AIR 29/512, CLE ORB, various entries between 22/08/1940 and 31/08/1940; the total may have been higher because it was not policy at that time to record the number of parachute descents on a daily or weekly basis
- ¹³³ *ibid.*, CLE ORB, "Appendix A – Progress up to 1/9/40", inserted between entries for 31/08/1940 and 01/09/1940; for withdrawal of the modified Irvin parachutes, see *ibid.*, entry for 29/07/1940
- ¹³⁴ *ibid.*, CLE ORB, entry for 03/09/1940
- ¹³⁵ *ibid.*, CLE ORB, entries for 10/08/1940, 12/08/1940 & 19/08/1940
- ¹³⁶ *ibid.*, CLE ORB, "Appendix A – Progress up to 1/9/40", inserted between entries for 31/08/1940 and 01/09/1940
- ¹³⁷ *ibid.*, CLE ORB, "Appendix A – Progress up to 1/9/40", and "Appendix B – Training Schedule", inserted between entries for 31/08/1940 and 01/09/1940
- ¹³⁸ *ibid.*, CLE ORB, entry for 11/08/1940
- ¹³⁹ *ibid.*, CLE ORB, entry for 12/08/1940
- ¹⁴⁰ *ibid.*, CLE ORB, entry for 13/08/1940
- ¹⁴¹ *ibid.*, CLE ORB, entry for 26/08/1940
- ¹⁴² for reference to Rock's injury, see PRO AIR 29/512, CLE ORB, entry for 22/08/1940. According to Harry Ward, the Irvin parachute canopy oscillated during descent, meaning any "trainees landing on a down-swing...was heading for a bad knock". Rock was concussed in just these circumstances; see Ward, p. 152; for reference to the Ringway conference and No. 22 Group assuming total administrative control of the CLS, see *ibid.*, CLE ORB, entry for 31/08/1940
- ¹⁴³ *ibid.*, CLE ORB, "Appendix A – Progress up to 1/9/40", and "Appendix B – Training Schedule", inserted between entries for 31/08/1940 and 01/09/1940
- ¹⁴⁴ PRO AIR 2/7338, doc. 3B, "Proposed Agenda for Future Conference to [delineate] Policy Governing Airlandings", dated 31/08/1941
- ¹⁴⁵ PRO AIR 29/512, CLE ORB, entry for 03/09/1940

- ¹⁴⁶ PRO AIR 2/7338, doc. 4A, letter from VCAS to AM D Plans, dated 03/09/1940; and doc. 4B, cover letter from Ismay to CAS for onward transmission of doc. 4A to PM, dated 02/09/1940
- ¹⁴⁷ PRO AIR 29/512, CLE ORB, entry for 06/09/1940
- ¹⁴⁸ PRO AIR 2/7338, doc. 6A, letter from AM to WO rescheduling conference, dated 03/09/1940; and doc. 6B, "Revised Agenda for Conference 5 September 1940", dated 03/09/1940; and doc. 9A, "Minutes of Joint Conference, 5 September 1940", dated 07/09/1940
- ¹⁴⁹ *ibid.*, docs. 15A, 16A, 18A & 19A, drafts and final instructions to No. 22 Group from AM, various dates between 20/09/1940 & 02/10/1940
- ¹⁵⁰ *ibid.*, doc. 23A, report from 22 Group to AM, dated 06/10/1940
- ¹⁵¹ PRO AIR 29/512, CLE ORB, entry for 01/10/1940; incidentally, the former entry still refers to the PTS as the CLS, which may have been a genuine error, or a deliberate one to conceal from the AM the extent to which the change over from CLS to CLE had been carried through prior to official sanction
- ¹⁵² PRO AIR 2/7338, doc. 25A, letter from AM to 22 Group calling conference on 18/10/1940, dated 14/10/1940; doc. 27A, agenda for conference, dated 14/10/1940; doc. 32B, minutes of conference 18/10/1940, dated 23/10/1940; and doc. 35B, "Note of Continuation of AM Meeting Begun 18 October 1940", dated 19/19/1940
- ¹⁵³ *ibid.*, doc. 36B, report "CLE: Report by 22 Group on [airborne] Results and Experience to Date – Including Graphs for Projected Glider Production", dated 03/11/1940; and doc. 37A, report "Organisation for Training Air Borne (sic) Troops" from AM D Plans, dated 04/11/1940
- ¹⁵⁴ PRO AIR 29/512, CLE ORB, entry for 18/09/1940
- ¹⁵⁵ *ibid.*, CLE ORB, Introduction
- ¹⁵⁶ *ibid.*, CLE ORB, entry for 19/09/1940
- ¹⁵⁷ *ibid.*, CLE ORB, entries for 21/09/1940, 03/10/1940 & 04/10/1940
- ¹⁵⁸ *ibid.*, CLE ORB, entry for 23/09/1940
- ¹⁵⁹ *ibid.*, CLE ORB, entry for 07/10/1940
- ¹⁶⁰ quoted from Newnham, p. 13
- ¹⁶¹ PRO AIR 29/512, CLE ORB, entry for 11/09/1940
- ¹⁶² the Boulton Paul Defiant was a single-engine, two seat fighter armed with a power turret mounting quadruple machine-guns to the rear of the cockpit. It was briefly successful but became something of a liability when the *Luftwaffe* became aware that it had no forward firing armament; it was then used for a time as a night-fighter before being retired from operational service
- ¹⁶³ Ward, pp. 142-143; DCO Keyes also referred to an "RAF machine-gunner who had been a pre-war parachutist" in connection with parachute modifications following the death of Driver Evans on 25 July 1940; PRO CAB 120/262, doc. 3, letter from DCO to PM, dated 27/07/1940
- ¹⁶⁴ see Ward, pp. 142-143
- ¹⁶⁵ PRO AIR 29/512, CLE ORB, entries for 27/07/1940, 31/10/1940 & 27/11/1940; operational records are not particularly precise on the details of the arrival at Ringway of non-flying personnel, or those below a certain level in the CLS/CLE hierarchy
- ¹⁶⁶ *ibid.*, CLE ORB, entry for 05/08/1940
- ¹⁶⁷ Ward, p. 143
- ¹⁶⁸ Ward, p. 149; the fan consisted of a drum of cable attached to a standard parachute harness, mounted atop a high indoor platform. The drum was fitted with paddles, the air resistance of which slowed the revolutions

of the drum when a trainee stepped off the platform to that of a parachute descent; it therefore took some cold courage to take that step. One trainee who used the apparatus in the 1970s likened the impact to that of "jumping from a six-foot wall"; see Michael Asher, *Shoot To Kill*, p. 81

¹⁶⁹ PRO AIR 29/512, CLE ORB, entries for 01/08/1940 & 02/08/1940

¹⁷⁰ Newnham, p. 49; and Ward, p. 149

¹⁷¹ Newnham, p. 49; for details of balloon observer's use of parachutes in the First World War, see for example Quarrie (*Airborne Assault*), op. cit., pp. 26-28

¹⁷² parachute training was included in the training of Polish Army officer cadets from August 1937 as one of several character building activities that also included sport gliding. The parachute course was four weeks in duration, and included ground training, parachute packing, 2-3 jumps from a captive balloon with a ripcord operated parachute, and 3 similar descents from an aircraft; notes from interview with Lieutenant-Colonel Staff Jan Jozef Lorys (retd.), 16/06/1998. I am indebted to Mr Andrzej Suchcitz, Secretary of the Polish Institute and Sikorsky Museum, for both arranging and providing a location for the interview; and to Colonel Lorys and his wife for taking the time to answer my questions

¹⁷³ Poles first feature in the CLE operational records in late October 1940, which refers to "New Polish officers [being] separated for Special Parachute Instruction", although it is unclear whether this was as trainees or instructors; either variation is possible, and it is thus not impossible that Strange picked up on the idea of using balloons at some earlier, unrecorded meeting; see PRO AIR 29/512, CLE ORB, entry for 28/10/1940; Polish input into the establishment of British Airborne Forces is discussed more fully below

¹⁷⁴ *ibid.*, CLE ORB, entry for 27/11/1940

¹⁷⁵ Ward, p. 151; for a colourful account of this test visit, see *ibid.*, pp. 149-152

¹⁷⁶ quoted from extract in Newnham, p. 50

¹⁷⁷ Ward, p. 152; interestingly, the operational records make no mention of Captain Elliot's involvement, although he is cited in Newnham's account of events. On the other hand, neither Newnham nor Ward mentions the involvement of RAF Warrant Officer Brereton who, according to the operational records, accompanied Ward to Cardington for the balloon test: see Newnham, p. 50; and PRO AIR 29/512, CLE ORB, entry for 27/11/1941

¹⁷⁸ see Ward, p. 152; and PRO AIR 29/512, CLE ORB, entry for 08/04/1941

¹⁷⁹ for highlights, see PRO AIR 2/4586, doc. 49A, letter from Works Area No. 4 to Air Ministry re: permission to establish Balloon Landing Ground at Tatton Park, dated 20/02/1941; doc. 53A, letter from RAF Army Co-operation Command to Air Ministry, dated 02/04/1941; doc. 53C, letter from Lord Egerton's Estate Manager to Air Ministry giving owners permission for establishment of balloon installation at Tatton Park, dated 07/02/1941; doc. 53C, letter from Cheshire War Agriculture Executive Committee to CLE withdrawing ploughing order for Tatton Park, dated 24/03/1941

¹⁸⁰ *ibid.*, doc. 54A, letter from Director of Works to Supervising Engineer No. 4 Works Area authorising construction of balloon installation at Tatton Park, dated 12/04/1941; and doc. 56A, letter from Air Ministry Director of Organisation to HQ RAF, Bracknell authorising establishment of Balloon Landing Ground at Tatton Hall Park, dated 16/04/1941

¹⁸¹ Newnham, p. 50

¹⁸² Ward, p. 149. A tower was eventually constructed and used for ground training at Ringway, influenced by the Polish tower constructed at their own parachute training centre at Leven in Fife in 1941, rather than Williams' suggestion. The Polish example was one hundred feet high and was constructed with a £500 grant from Polish Army HQ and whatever the Poles were able to beg, borrow or steal, including the help of a local Scottish construction firm. It was opened at a public ceremony on 20 July 1940; see Cholewczyski, op. cit., p. 49; for photographic evidence of the Ringway tower, see Peter Harclerode "Go to It": *The Illustrated History of the 6th Airborne Division*, pp. 27-28, and plates on pp. 29, 30

¹⁸³ the balloon was superseded by the Brittan Norman Islander aircraft, on the grounds of economy; see David Reynolds, *Paras: An Illustrated History of Britain's Airborne Forces*, p. 11

-
- ¹⁸⁴ only one glider reached the objective due to "unfavourable cloud conditions"; see PRO AIR 29/512, CLE ORB, entry for 29/09/1940
- ¹⁸⁵ *ibid.*, CLE ORB, entry for 06/10/1940
- ¹⁸⁶ *ibid.*, CLE ORB, entry for 14/10/1940
- ¹⁸⁷ *ibid.*, CLE ORB, "Appendix A: Development Unit, CLE, Ringway, October 1940 Establishment", following entry for 31/10/1940
- ¹⁸⁸ Thetford, p. 621
- ¹⁸⁹ PRO AIR 29/512, CLE ORB, entry for 21/01/1941
- ¹⁹⁰ *ibid.*, CLE ORB, entry for 26/10/1940
- ¹⁹¹ *ibid.*, CLE ORB, entry for 13/12/1940
- ¹⁹² *ibid.*, CLE ORB, entry for 19/11/1940
- ¹⁹³ *ibid.*, DU ORB, entry for 27/11/1940
- ¹⁹⁴ *ibid.*, DU ORB, entry for 30/11/1940
- ¹⁹⁵ *ibid.*, DU ORB, entries for 04/12/1940 & 10/12/1940
- ¹⁹⁶ *ibid.*, DU ORB, entry for 09/12/1940
- ¹⁹⁷ *ibid.*, DU ORB, entry for 11/12/1940
- ¹⁹⁸ *ibid.*, DU ORB, entry for 06/11/1940; and Wright, p. 14
- ¹⁹⁹ Wright, p. 14
- ²⁰⁰ PRO AIR 29/512, DU ORB, entries for 13/12/1940 & 14/12/1940
- ²⁰¹ Wright, p. 14; and PRO AIR 29/512, DU ORB, entry for 09/11/1940
- ²⁰² Wright, p. 13; and Claude Smith, *The History of the Glider Pilot Regiment*, p. 8
- ²⁰³ Wright, pp. 14, 35-36, 44; quotation from *ibid.*, p.44.
- ²⁰⁴ PRO AIR 32/2, doc. 7A, "Provisional Training Programme using Sporting Gliders at Ratcliffe and Rearsby or Similar Site", dated 23/10/1940; and doc. 8A, "Suggested Training Scheme for Coxwains of Troop Carrying Gliders", also dated 23/10/1940; for air photograph interpretation training, see Wright, p. 44.
- ²⁰⁵ *ibid.*, doc. 3A, minutes of meeting at Air Ministry, dated 05/09/1940
- ²⁰⁶ quoted from Otway, p.31.
- ²⁰⁷ PRO AIR 29/512, DU ORB, entry for 05/11/1940
- ²⁰⁸ *ibid.*, DU ORB, entry for 11/11/1940
- ²⁰⁹ *ibid.*, DU ORB, entry for 24/11/1940
- ²¹⁰ *ibid.*, CLE ORB, entries for 14/03/1941 & 18/03/1941
- ²¹¹ PRO AIR 32/2, doc. 4A, memo from Hodges to 22 Group, dated 12/09/1940
- ²¹² *ibid.*, doc. 6A, letter from 22 Group to CLE, dated 19/09/1940
- ²¹³ PRO AIR 2/7338, doc. 12A, letter from 22 Group to AM, dated 19/09/1940

-
- ²¹⁴ *ibid.*, doc 14A, letter from AM DTO to ACAS, dated 23/09/1940; and doc. 14B, letter headed "Subject: Air Landing Troops", from DCO/WO to 22 Group, dated 20/09/1940
- ²¹⁵ Otway, Appendix "A", pp. 391-393
- ²¹⁶ Wright, pp. 18-19
- ²¹⁷ Newnham, pp. 54, 56.
- ²¹⁸ PRO AIR 2/4586, letter from Air-Commodore Hollinghurst, Air Ministry Dept. Organisation to Air Ministry 01, dated 08/10/1940
- ²¹⁹ *ibid.*, doc. 39A, letter from Air Ministry to HQ, Bomber Command, dated 12/10/1940.
- ²²⁰ PRO AIR 2/7338, doc. 33A, letter from AM DPlans to DCAS, dated 23/10/1940.
- ²²¹ PRO AIR 29/512, CLE ORB, entry for 16/10/1940
- ²²² *ibid.*, CLE ORB, entry for 18/10/1940
- ²²³ PRO AIR 2/7338, doc. 36B, report "CLE: Report by 22 Group on Results and Experience to Date", dated 03/11/1940; and doc. 37A, report from AM DPlans, "Organisation for Training Airborne Troops", dated 04/11/1940.
- ²²⁴ PRO AIR 29/512, CLE ORB, entries for 8/11/1940 & 13/11/1940
- ²²⁵ *ibid.*, CLE ORB, entries for 14/11/1940 & 15/11/1940
- ²²⁶ PRO AIR 2/7338, doc. 49A, letter from Hollinghurst, Dept. Organisation to DD01, dated 18/11/1940.
- ²²⁷ PRO AIR 29/512, CLE ORB, entry for 17/11/1940
- ²²⁸ *ibid.*, CLE ORB, entries for 20/11/1940, 21/11/1940 & 22/11/1940
- ²²⁹ *ibid.*, CLE ORB, entries for 24/11/1940 & 06/12/1940
- ²³⁰ Wright, pp. 25-27.
- ²³¹ PRO AIR 29/512, CLE ORB, entry for 05/12/1940
- ²³² *ibid.*, CLE ORB, entries for 12/12/1940 & 17/12/1940
- ²³³ PRO AIR 2/7338, doc. 55B, "Minutes of Air Ministry Meeting", dated 11/12/1940; PRO AIR 2/4586, doc. 46A, letter from Air Ministry DDOPs to OP1, dated 20/12/1940; and Wright, pp. 27-28.
- ²³⁴ PRO AIR 29/512, CLE ORB, entries for 20/12/1940, 30/12/1940 & 31/12/1940
- ²³⁵ *ibid.*, CLE ORB, entry for 01/01/1941
- ²³⁶ PRO AIR 2/4586, doc. 44A, Postagram from Supervising Engineer No. 11 Works Area to AM, dated 20/12/1940. Bessonneau hangars were wire-braced wood and canvas structures of French design, first used by the RFC in France 1915; for details see Raleigh and Jones, *op cit.* (The War in the Air Volume 1), pp. 186-187
- ²³⁷ PRO AIR 29/512, CLE ORB, entry for 02/01/1941
- ²³⁸ PRO AIR 2/4586, doc. 45A, letter from AM DOrg to RAF ACC, dated 18/12/1940; for a participant account of the GTS move, and a colourful description of the flying facilities, see Wright, pp. 28-30.
- ²³⁹ PRO AIR 29/512, CLE ORB, entry for 03/01/1940
- ²⁴⁰ *ibid.*, CLE ORB, entry for 04/01/1941
- ²⁴¹ PRO AIR 2/7338, doc. 71C, letter from AM DMC to AM DTO, dated 17/01/1941.

²⁴² PRO AIR 29/512, entries for 16/01/1941, 27/01/1941, 03/02/1941 & 05/02/1941. The January 1940 trials incorporated tests to ascertain glider detection from the ground at night with and without moonlight, and with searchlights; for a participant account, see Wright, pp. 37-42. Similar trials were held at the same location at the end of 1941, using the Hotspur.; see PRO AIR 39/52, doc. 7A, minute from Major Fyffe, detailing the necessary personnel, equipment and aircraft, dated 28/11/1941; doc. 9A, granting approval for the trials, dated 01/12/1941; and PRO AIR 40/298, "Defence Against Glider Attack by Night: Joint Note by Director Fighter Operations and Deputy Director of Air Tactics", dated December 1941

²⁴³ PRO AIR 29/512, CLE ORB, entry for 21/03/1940

²⁴⁴ Sergeant Strathdee was a trained RAF pilot who resigned his commission to participate in the Spanish Civil War, presumably on the Nationalist side given Wright's reference to him having flown "Messerschmitts before Tiger Moths"; he was killed in Operation "Freshman", the abortive glider raid upon the German "heavy water" production plant at Vermork in occupied Norway, in November 1942; for details of the "March firsts", see Wright, p. 45; for Operation Freshman, see Otway, pp. 70-73; and Richard Wiggan, **Operation Freshman: The Rjukan Heavy Water Raid 1942**

²⁴⁵ PRO AIR 29/512, CLE ORB, entry for 10/04/1941

²⁴⁶ Wright, p. 16

²⁴⁷ PRO AIR 29/512, CLE ORB, entries for 02/10/1940 & 11/10/1940

²⁴⁸ *ibid.*, CLE ORB, entry for 22/12/1940

²⁴⁹ *ibid.*, CLE ORB, entry for 10/09/1940

²⁵⁰ *ibid.*, CLE ORB, entries for 26/09/1940 & 26/10/1940

²⁵¹ Hearn (*Flying Rebel*), p. 121. Hearn is most positive on the date, but may be mistaken, for whilst operational records show that PTS personnel successfully participated in an "Army cop-operation exercise" on that date, a later entry specifically refers to King Olaf observing a parachute demonstration in February 1941, although that does not preclude the possibility that the Norwegian monarch attended two demonstrations; see PRO AIR 29/512, CLE ORB, entries for 03/12/1940 & 19/02/1941

²⁵² PRO AIR 29/512, CLE ORB, entries for 26/10/1940 & 13/12/1940

²⁵³ *ibid.*, CLE ORB, entries for 02/01/1940 & 06/01/1941

²⁵⁴ *ibid.*, CLE ORB, entry for 19/02/1940

²⁵⁵ Otway, p. 32; the new title literally reflected the Battalion's proposed function, and linkage with David Stirling's later unit of the same name is purely coincidental

²⁵⁶ Newnham, p. 34

²⁵⁷ PRO WO 32/9778, doc. 24A, letter from Rock to WO SD4, dated 07/07/1941; and doc. 24B, paper "Formation of Further Parachute Battalions", n.d., c.07/07/1941

²⁵⁸ Otway,

²⁵⁹ PRO AIR 29/512, CLE ORB, "Colossus Details", Appendix "3", "Schedule of Aircraft Loading", inserted between entries for 30/01/1941 & 01/02/1941

²⁶⁰ for a contemporary participant account, see PRO CAB 106/8, "Account of Operation Colossus, Combined Operations Raid in Italy, 1941 February 10, by Lt. A. J. Dean Drummond"; for a detailed and well illustrated secondary account, see Margry; and Otway, pp. 63-65.

²⁶¹ PRO AIR 29/512, CLE ORB, entry for 01/02/1941

²⁶² This is covered in detail below

²⁶³ Otway, pp. 64-65

²⁶⁴ Newnham, p. 25; and Margry, p. 9

²⁶⁵ Margry, p.9.

²⁶⁶ PRO AIR 29/512, CLE ORB, "Colossus Details", entry for 11/01/1941

²⁶⁷ *ibid.*, CLE ORB, entry for 13/01/1941; and Ward, p. 155

²⁶⁸ *ibid.*, CLE ORB, entry for 14/01/1941

²⁶⁹ *ibid.*, CLE ORB, entry for 22/01/1941; and Ward, p. 156

²⁷⁰ *ibid.*, CLE ORB, entry for 01/02/1941; for intervention by Knutsford Fire Brigade, see Newnham, p. 28

²⁷¹ Ward, p. 155

²⁷² PRO AIR 29/512, CLE ORB "Colossus Details", entry for 02/02/1941; the aircraft were drawn from Nos. 51 and 78 squadrons. The Air Ministry originally tried to substitute four Bombays for the operation, and were only dissuaded following protests by the CLE; for details of aircraft source, see Margry, p. 12; for details of the inclusion of Bombay aircraft, see *ibid.*, CLE ORB "Colossus Details", entry for 11/01/1941; Margry, p. 11; and Newnham, p. 27

²⁷³ HM Submarine Triumph was scheduled to lay off the mouth of the River Sele on the nights of 15-16 and 17-18 February 1941. By cruel coincidence, a Whitley bomber damaged in a diversionary bombing attack force-landed in the same area. As the pilot had transmitted a coded signal requesting rescue for his crew, the Admiralty not unreasonably considered the security of the Colossus rendezvous compromised, and recalled HMS Triumph on 13 February; see Margry, p. 18; and Otway, p. 65

²⁷⁴ Margry, p. 18; for details of this view, see Raymond Foxall, *The Guinea Pigs*. Such charges are easy with the aid of armchair hindsight, but the Admiralty's decision, however distasteful, was nonetheless correct given its first priority, which was the preservation of the vessel. In addition, the risks of the venture were made very clear to prospective volunteers. The CO of 11 SAS battalion pulled no punches in his preamble to calling for volunteers, pointing out that "...it was unlikely that any arrangements would be made for the 'extraction' of the 'survivors'". Newnham also referred to the fact that "British policy insisted that any raiding operation ...must allow a sporting chance for the men to get back home - a project that meant certain death or capture would not be entertained." Of course, what constitutes a "sporting chance" is open to conjecture, but the calibre of the decision-makers involved, as well as the fact that HMS Triumph was despatched at all, make it unlikely that X Troop was written off beforehand; for quotes, see Margry, p. 10; and Newnham, p. 25

²⁷⁵ quoted from Otway, p. 65

²⁷⁶ see *ibid.*, p. 65 and plates 27-29, between pp. 356-357. Examples of the "CLE Container" can be seen on display at the Airborne Forces Museum, Aldershot, Hampshire

²⁷⁷ see for example "Our Paratroops Strike", *The Sheffield Telegraph and Independent*, Saturday 15 February 1941, p. 1, reproduced in Margry, p. 23.

²⁷⁸ Margry, p. 24

²⁷⁹ in RAF parlance, a despatcher is an aircrewman tasked to oversee a parachute jump from within the aircraft; his duties include ensuring that parachutist's static lines are correctly "hooked up", ensuring the pilots orders via the red and green jumping lights are obeyed, the safe removal of refusals from the stick, and the recovery of static lines into the aircraft after the jump.

²⁸⁰ Hearn, (*Flying Rebel*) p. 122

CHAPTER SIX

Divergence at the Top: The War Office, the Air Ministry, and the First Stage of the Development of the British Airborne Force

The Central Landing Establishment lacked unified direction for the first ten months of its existence, but the effects of this on the process of establishing an airborne training infrastructure were minimal. Differences of opinion on the role, shape, and size of the airborne force only became apparent after the initial steps had been taken, when guidance for further development was sought. This chapter will examine how the Army's view of the airborne force shifted, and the Air Ministry's reaction to that shift. It will also compare and contrast the underlying philosophies of the two services, and detail the progress achieved by the end of April 1941 and Churchill's reaction thereto.

1. From Raiding to a Larger Role: The Army Begins to Shift its View

At the outset, the Air Ministry and War Office accepted that airborne operations would be limited in size and scope. The Air Ministry envisaged parachute troops being deployed for sabotage, limited missions to seize locations for that purpose or possibly pending relief from ground forces.¹ The merging of airborne recruiting with that for special service units generally indicates that the War Office initially concurred in this.² However, both services had their own very different reasons for accepting the raiding rationale. The Air Ministry favoured the raiding rationale because it minimised the resources they had to provide, and a platform for further reductions. The War Office's tacit agreement was equally pragmatic, but oriented in the opposite direction. A parachute raiding force provided a cadre and test bed for future expansion, and reduced the pressure on the Army in the immediate post-Dunkirk period. Neither was it long before the Army began to think in larger terms than raiding for the new airborne force. By early September Major Rock was arguing that it be employed as a spearhead for a major offensive, such as the seizure of a Channel port for an invasion of France.³

The War Office's thinking was not immediately apparent. There was certainly no inkling of it at the joint conference at the Air Ministry on 5 September 1940. The upshot of this was to cap the size of the new force at 3,000. It was to be operational by the spring of 1941, and used primarily for raiding. The bulk of the force was to be carried in gliders, whilst the parachute requirement was reduced to a three hundred strong pathfinder group, whose primary task was to secure landing zones for the gliders. The conference recommended that the remaining two hundred parachute volunteers be used as saboteurs.

The prospect of using the airborne force for spearhead operations in the future was held out as a sop to the Army, and it was also acknowledged that the Middle East provided "greater opportunities" for airborne deployment.⁴ That, however, was as far as the Air Ministry was willing to go in accommodating the wishes of the War Office.

The Air Ministry thus appeared to have carried the day, not least because RAF officers outnumbered Army attendees. Of the nine named attendees, only three – Lieutenant-Colonel Bourne RM (representing the Director of Combined Operations), Lieutenant-Colonel Stephenson from the War Office, and Major Rock - were not serving RAF officers. This was something of an imbalance for a joint conference,⁵ and Air Ministry satisfaction doubtless increased after Ismay passed on Churchill's favourable reaction on 13 September 1940.⁶

However, War Office quiescence did not imply agreement. It was obliged in part because the Army was experiencing difficulty in obtaining sufficient parachute volunteers to fill the existing Commando establishment. This provided a rather poor basis on which to argue for any expansion of the airborne commitment. The Army's reaction was also muted because the War Office was still mulling over the possibilities offered by gliders. The fact that the Director of Military Operations and Planning at the War Office did not disseminate the conclusions of the 5 September 1940 conference until 18 September supports this,⁷ and expansionist War Office thinking was doubtless encouraged by enquiries about airborne forces from outside the UK. Middle Eastern Command raised the matter of setting up a PTS there twice on 16 September 1940, asking for the necessary War Establishment, medical and administrative details for parachute volunteers, and samples of special equipment and specialist personnel.⁸ A similar request was received from India in early October.⁹

War Office thinking crystallised as a result of an Air Ministry call for a further conference on 2 October 1940.¹⁰ This prompted a high-level internal meeting at the War Office, which re-affirmed adherence to the target of training a 3,000 strong airborne force by 1941. More importantly, it agreed that it should be made clear to the Air Ministry that the Army would have expanded requirements after that date and that these would include light tanks, artillery and other heavy equipment.¹¹ In fact, the Army did not reveal its hand, apart from an ambiguous closing comment from an Army attendee to the effect that modification of the airborne agreement reached might become necessary at a later date.¹²

Why the War Office did not to lay its cards on the table at this point is unclear, but it was certainly not due to any change of mind. The CLE and the relevant War Office departments subsequently busied themselves obtaining data for possible alternative loads for gliders. The War Office passed a list of weights and measures for a variety of military equipment to Rock on 10 November 1940. This included details of tanks, Universal Carriers, trucks, motorcycle combinations and Bofors light anti-aircraft guns.¹³ It was supplemented on 22 November 1940 by a list of current locations for a variety of units. These included some equipped with light 3.7 inch howitzers, along with the weight and crew requirements of the weapon.¹⁴ A further letter on 12 December 1940 discussed the suitability of tentative glider designs for the carriage of vehicles.¹⁵

In parallel with this, the War Office continued low-key encouragement for external commands interested in establishing airborne forces outside the UK. The War Office replied to the enquiries from Middle Eastern Command on 11 October 1940 with a précis of the current airborne policy in the UK, permission to establish a PTS in the Middle East for local use, and an offer to update the War Establishment already supplied. It also warned that no additional aircraft could be expected from the UK.¹⁶ Middle Eastern Command responded four days later with undiminished enthusiasm. Bombay and Wellington aircraft were thought to be available locally, it was planned to commence parachute training by January 1941, and previous demands for parachute instructors and samples of special equipment were repeated; arrival of the former was considered vital before 2 November 1940, for some unexplained reason.¹⁷ Sadly, this enthusiasm proved misplaced. The next contact from Middle East Command on the subject did not occur until 4 December 1940, when the War Office was informed that HQ RAF Middle East claimed it had no aircraft for use by a local PTS, and requested an expert from the UK to advise further. After this the matter appears to have been dropped.¹⁸ Hopes for an Indian PTS at this time proved to be similarly misplaced. At the end of January 1941 the War Office recommended that Indian Command postpone raising Indian parachute battalions until the position was clarified in the UK, citing the shortage of suitable aircraft as justification.¹⁹

The War Office provided the Air Ministry with the first official confirmation of its revised requirement on 11 November 1940, when it announced that a further decision on the shape of the airborne force was necessary to include heavy weapons, light armour and transport.²⁰ The Air Ministry may have already been aware of the War Office's shifting views, possibly via the CLE. A report compiled by the CLE for the Air Ministry on 31 October 1940, for example, expanded the suggested functions for the airborne force to six, including "spearhead offensive action within a five hundred mile radius of action". It also

gave the opinion that "...an airborne force in excess of 5,000, fully trained [and] with light artillery and transport could, by concentrated effort, be available by May 1942".²¹ This doubtless came as a surprise to the Air Ministry, which was presumably satisfied up to this point that it had succeeded in whittling the airborne project down to a more appropriate size.

II. Digging in of Heels: The Air Ministry's Reaction To the War Office's Shift of Focus

The Air Ministry reaction was swift. A draft response was circulated internally and to the CLE by the Air Ministry's Director of Military Co-operation, Group-Captain Goddard, on the same day that the War Office letter was received.²² Goddard's minute examined the matter from the ground up, including questioning the viability of Ringway for the CLE, and expressed his personal support for the airborne project on the grounds that "... this nation [i.e. Britain] more than any other will need its 'Flying Columns'". Goddard incorporated comments received by 16 November, and the finished document was passed to the Air Ministry Department of Plans on 23 November 1940.²³ Goddard began by bluntly stating that the aims of the 5 September 1940 conference were no longer attainable, and that the Army requirement for two invasion corps necessitated "...decisions at the highest level to establish a definite [airborne] programme and levels of priority". The minute then went on to examine and comment upon virtually every facet of airborne progress to date. The decision to train soldiers as glider pilots was questioned:

"They [the glider pilots] will be required, in effect, to make spot landings in swift succession and in order, on unknown places with a dead stick in a large engineless aeroplane, having been released from their tows over some unknown place, possibly in twilight. This is no task for a beginner who is primarily a soldier".²⁴

The need for RAF control over the flying side of airborne operations was also stressed, using the naval role in amphibious operations as an analogy to illustrate several points. The lack of an overall strategic plan for the development and employment of the airborne force was raised, as was the need firmly to establish what the minimum demands of an airborne force were to be, and the date by which they were to be realised. The paper closed with the suggestion that the Chiefs of Staff appraise Churchill of the situation.

Goddard's minute caused a furore in the Air Ministry. Open hostility to the airborne idea rose to the surface, as the following quote from an internal communication from the Vice

Chief of Air Staff, Arthur Harris, to the Air Ministry's Director of Plans on 30 November 1940 shows:

“From the original idea of a force of parachutists, the scheme has progressed rather like a Snowball [sic] and now has reached considerable dimensions. I can find no trace of this scheme [i.e. the War Office requirement for two airborne invasion corps] ever having received Chiefs of Staff blessing and I think that...before we are irretrievably committed we ought to have a clear indication of the purpose for which these air-borne [sic] troops are required and into what strategical plan they are to fit”.²⁵

The minute prompted more than mere acerbic comment from the pro-bomber lobby. A joint conference was scheduled at the Air Ministry for 11 December 1940. It closely followed Goddard's lead, and was intended “...to avoid specifics and determine basic principles only for immediate action by the Air Ministry”.²⁶ Three types of airborne operation were envisaged; invasion spearhead, tactical involvement in the land battle, and espionage and sabotage operations. Gliders were to be used for large operations, whilst paratroops were to be used primarily for marking glider landing zones, for sabotage operations, and possibly for small scale operations to seize tactical points. The Air Ministry was thus willing to go some way to accommodate Army requirements, although the stipulations which followed showed that they were not willing to move very far. Paratroops were “...not to be employed en masse for [unstated] reasons decided by the Air Staff and General Staff”, and the ceiling of five hundred paratroops was not to be exceeded without specific Chiefs of Staff sanction; this included the training of foreign troops at Ringway. The matter of who should provide personnel for glider pilot training was raised, with the suggestion that the RAF provide these because the task required the same level of skill as piloting a bomber. The agenda also suggested agreement be reached as to the immediate requirements for glider pilot and parachute training, which additional airfields could be provided, and that an airborne progress timetable be agreed. Two appendices were attached to the agenda, a progress report by the CLE, and a suggested organisation for an Aerodrome Capture Group, presumably provided by the War Office.

The minutes of the 11 December 1940 conference reflect some disagreement over the proposals in the Air Ministry's agenda. The five hundred parachutist limit was challenged by the Commander in Chief Home Forces in absentia, with the transmission of his wish for as many paratroops as possible over that limit, and a request that a total of three hundred Polish and two hundred Free French personnel should also receive parachute training. Air Ministry representatives cagily agreed to the C in C's requests, providing that it did not require an expansion of the existing training organisation, and with a rider against any

“...tendency to assume aircraft would be available for extra parachutists when trained”. Both these pronouncements ring rather hollow. The former because CLE complaints over the dearth of parachuting aircraft must have been common knowledge at the Air Ministry, and the latter because it conveniently overlooked the Air Ministry’s pledge to turn over a whole Whitley Group for parachute-dropping duties, made back in June 1940.²⁷

The chairman of the conference also departed from the agenda to raise the matter of labelling gliders as such. This, he suggested, was a misnomer on the grounds that the large gliders envisaged were in fact very large powered troop carriers: the fact that their power was on the end of a tow-rope made no difference except to increase handling difficulties. The chairman also pointed out that the planned twenty-five seat craft was the same dimensions as the Short Stirling heavy bomber, and that making “spot” landings in such a machine was the equivalent to landing the largest powered troop-carrying aircraft with a dead-stick.²⁸ The underlying reason for the chairman’s assertion appears to have been to support the Air Ministry’s growing conviction that only bomber pilots would be sufficiently qualified to fly the large gliders then under development. This is supported by the comment made by DCAS Arthur Harris at the close of the meeting:

“The idea that semi-skilled, unpicked personnel (infantry corporals have, I believe, even been suggested) could with a maximum of training be entrusted with the piloting of these troop carriers is fantastic. Their operation is equivalent to forced landing the largest sized aircraft without engine aid - than which there is no higher test of piloting skill.”²⁹

For their part, the Army appears to have been indifferent as to where the pilots came from. One of the War Office representatives at the conference, Lieutenant-Colonel Stephenson, pointed out that the Army was not insistent on glider pilots being soldiers. The important thing was that pilots were provided, a fundamental difference in approach to which we shall return. The Air Ministry may have been angling to make flying gliders an alternative job for bomber pilots, presumably because this would require an expansion in bomber pilot numbers. The Air Ministry Deputy Director of Operations and Planning was swift to point out that any increase in glider pilot provision would mean a reduction of RAF resources to the tune of three hundred and fifty bomber pilots per month, although the basis for this assertion was not given. The conference also proposed that a paper be prepared for transmission to higher authority for a decision. The conference closed by commenting that the airborne project was doomed to failure unless more glider pilots could be found from existing output, but this was impossible due to other aircrew requirements. One suggested option was to expand flying training *per se* to make up the shortfall, with

the redirection of war-weary bomber crews to glider duties as a second possible long-term option.

The 11 December 1940 conference thus failed to meet its stated objective of establishing clear principles for Air Ministry immediate action. In fact, the opposite happened, for the conference threw up more differences than it resolved. It did have one, perhaps unexpected side-effect, however, in that it prompted both the Air Ministry and War Office into officially stating their position with regard to the airborne project, in papers which appeared in late December 1940 and early January 1941 respectively.

III : Cards on the Table at Last: The Papers of 23 December 1940 and 10 January 1941

The Air Ministry set out its airborne position in another paper compiled by Goddard, entitled "Provision of Airborne Forces – Air Ministry Aspect", which appeared on 23 December 1940;³⁰ it was passed to the War Office by 1 January 1941.³¹ The paper began by pointing out the impossibility of planning or providing resources for the airborne force in the absence of an operational or strategic plan. It then reiterated the Air Ministry's view of what airborne operations should consist of as detailed in the agenda for the 11 December conference. This was followed by a promotion of the RAF's role, as the "most competent provider of the necessary skill, expertise and equipment for airborne operations". The staff at Ringway might have disputed this claim. It also insisted that all pilots for airborne forces had to remain in the RAF. The latter point, interestingly, ignores the previous Air Ministry line that the Army should provide personnel for training as glider pilots.

This was followed by a series of wide-ranging recommendations. The lack of a strategic plan for the employment of the new airborne force was cited as justification for maintaining the parachute effort at its current level, albeit with the addition of sufficient trained RAF pilots to allow further research and development work, small-scale tactical training exercises, and demonstrations. It was also suggested that airborne facilities be established in India because this would be more convenient for the deployment of parachute troops in the Mediterranean, an assertion which indicates that the Air Ministry was privy to the enquiries from India and Middle Eastern Command. The paper then went on to reject the German model of air-landing operations, because of the high loss of powered aircraft this entailed. In the RAF, these machines were bombers and therefore "...too valuable to risk".

Having disposed of peripheral issues, the paper then got down to its real purpose by laying out the Air Ministry's view of how the airborne force should be developed. It recommended that inserting troops by parachute should be restricted to minor operations, and to the first flights of major airborne operations, because parachuting was considered an inefficient and costly method of using personnel and aircraft. Gliders were considered to be the superior and desirable alternative, with stocks of the appropriate types to be established as and when possible. However, it was made clear that the process of equipping, producing and employing gliders and providing the necessary pilots was "...not to be at the expense of RAF Commands now engaged in major operations, until the adoption of a [airborne] plan for execution requires it". It also recommended that the existing programme be abrogated, and that the existing plan be abandoned as impossible to achieve, although it stressed that the Air Ministry wished to be governed by the Ministry of Aircraft Production, the War Office and the Director of Combined Operations. The paper closed on a more conciliatory note, by holding out the possible availability of obsolete aircraft for airborne use by 1942, and suggesting that the situation might change if the supply of pilots were to outstrip that of aircraft. The establishment of a separate airborne service, with its own organisation and uniform was also dismissed as impractical under the present circumstances.

Little was new in the 23 December 1940 paper. The dissatisfaction with the parachute, for example, and the wish to see it largely replaced by the glider, merely reiterated Air Ministry views first expressed in August 1940.³² What was new was the clarity with which Air Ministry opinion was expressed. Gliders were not merely suggested as an alternative to the parachute, but their status as such was taken as read, and the fact that airborne development was not to be allowed to interfere with other RAF activities under any circumstances was stated equally bluntly. For all its change of tone, the paper was nonetheless largely more of the same, and contained as many flaws as those that preceded it. The lack of a strategic plan for airborne development and employment was cited as justification for back-peddalling: this was a reasonable argument, but one which overlooked the fact that Air Ministry fudging at joint conferences to resolve the matter was proving a major obstacle to the formulation of any firm policy. Similarly, the tone of the document implies that existing aircraft provision at Ringway was sufficient, which was blatantly not the case as the Air Ministry well knew. The suggestion that additional airborne facilities should be provided in India was a rather surprising development, given that the home airborne establishment was so seriously undermanned and equipped at that time. Consequently, it looks suspiciously like a cynical attempt to hamstring the CLE further by diffusing the scant resources available, and possibly get the whole project moved away

from the centre of events where it could be more easily sidelined. Neither does the carrot of possible future diversion of obsolete aircraft to the airborne force ring quite true. As we have seen, the Air Ministry had to date made no effort to divert the already obsolete Bristol Bombay and Handley Page Harrow aircraft to the airborne project, nor to provide, even on a temporary basis, the promised Whitley Group. The offer appears to have been mere window dressing.

Goddard's paper therefore merely restated the Air Ministry's existing position, albeit in a clearer and blunter form. The provision of an airborne force was still, six months after its official establishment, considered an unwarranted diversion of resources for which the Air Ministry was willing to provide only the bare minimum equipment and effort. Indeed, there were some at the Air Ministry who felt that Goddard's opposition had not gone far enough, as illustrated by DCAS Harris's comments on receipt of a draft of Goddard's paper on 24 December 1940:

“The attached draft by the DMC seems suited to the purpose to which I understand you intend to put it. The main points seem to be to put to the War Office and PM [are]

that the ideas of soldier pilots to [fly] gliders is hopeless

that the prospect of 360 efficient big glider pilots by spring [of 1941] is equally hopeless – as of 100 to that matter

no amount of wishing and waving can push aside these facts”.³³

Given his enthusiasm for strategic bombing, Harris's reaction was predictable, but others within the Air Ministry were less extreme, albeit possibly due to a wish to avoid unnecessary unpleasantness rather than any heartfelt support for the airborne project. Goddard, in a letter to the Vice Chief of Air Staff on 31 December to confirm despatch of his paper to the War Office,³⁴ added a post-dated PS.³⁵ In this, whilst he recommended that prior Army requests for a brigade-size airborne force be rejected on the grounds contained in his paper, Goddard also referred to the head of Army Co-operation Command being informed that Churchill was concerned on hearing that airborne progress was not proceeding as planned, and added his opinion that the Prime Minister's endorsement should be sought on the proposals contained in the paper.

Churchill's reaction could be guessed, given his previous ones to the downgrading of the parachute force for 5,000 to five hundred, and to the Air Ministry's introduction of the glider into the airborne equation. In the event, he does not appear to have been consulted,

because within ten days of receiving Goddard's paper, the War Office responded with one of its own. Entitled "Airborne Troops – Policy For", this set out Army airborne requirements far in excess of the limits preferred by the Air Ministry.³⁶ Compiled by Lieutenant-Colonel Stephenson,³⁷ the paper began by laying out the Army's "General Requirements". These were for two five-hundred strong Aerodrome Capture Groups of parachutists, to be tasked to capture not only aerodromes, but also to seize small bridgeheads or small tactical features. They were to be capable of operating in all terrain, for a maximum of thirty-six hours, and within a five hundred-mile radius of their launching base.

At a stroke the Army was looking to double the existing parachute provision, and to re-orientate the parachute force toward supporting conventional operations rather than raiding, which would thus require more RAF resources. The War Office paper did not stop there, for it also contained a detailed table of organisation for what it termed "Invasion Corps", of which it required two. Each was to contain four infantry battalions and a substantial tail of support units, including a light tank squadron, a battery of 3.7 inch howitzers, two light anti-aircraft batteries, an anti-tank battery and medical and supply detachments (see Fig. 2). The entire Corps was to be air portable, although it was not planned to move the whole force in one lift. Instead, sufficient air resources were expected to enable the simultaneous lift of a small brigade HQ, two infantry battalions, the light tank squadron, the 3.7 inch and both light anti-aircraft batteries and elements of the supply and medical detachments, a force in the region of 1700 men. Smaller operations, employing around two to three hundred men without the heavy weapons, were also envisaged. This airlanding force was to be capable of operating for three days without resupply, also within a five hundred mile radius of its launch base. The paper closed by pointing out that whilst no specific date for establishment of the new units was included, "...we [the War Office] can only say that it should be as early as productive resources allow".

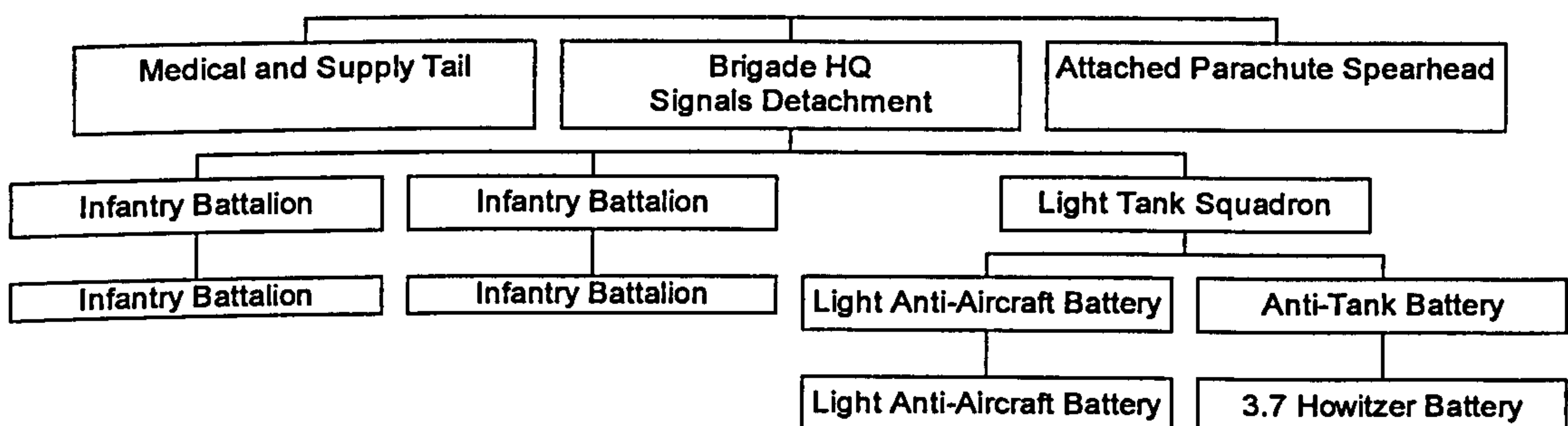


Figure 2 - Proposed Army "Invasion Corps", as detailed in WO Paper of 10 January 1941

The War Office paper contained a great deal that was new, at least to the Air Ministry. On the other hand, it should be noted that the size of the two Invasion Corps, including the two five hundred strong parachute detachments, totalled somewhere in the region of 5,000 men, and thus roughly met Churchill's original directive, albeit largely with glider rather than parachute troops.³⁸ Whilst the paper clearly stated War Office requirements, those requirements were somewhat optimistic given current resources, even allowing for Air Ministry obstructionism. This shows that there was also an element of mutual misunderstanding involved, over and above mere inter-service rivalry, which became clearly apparent in the aftermath.

IV: Mutual Misunderstanding and Differing Philosophies: Air Ministry, the War Office and the Shape of the Airborne Force

The first Air Ministry reaction to the War Office paper of 10 January 1941 appeared four days later. In a letter dated 14 January, Goddard acknowledged receipt, and suggested that, as the Air Ministry and War Office positions were at such variance, a joint paper on the matter be prepared for submission to the Chiefs of Staff Committee for adjudication. He also recommended that particular attention should be paid to the proposed ratio between parachute and glider troops, on the as yet unproven grounds that the former required more RAF resources. He reiterated the Air Ministry view that parachute troops should be a minority in whatever force was finally approved, and requested that the War Office formulate a specific Home airborne establishment for tactical development and joint anti-invasion training with Home Forces "...as distinct from any requirement for offensive operations overseas".³⁹

Much of this was predictable and unremarkable, apart from his final point regarding a separate airborne Home establishment. This suggests that Goddard, and by extension the Air Ministry, had failed to grasp that the Army did not view No. 11 SAS Battalion as a research and development testbed, but as a cadre for an operational airborne force which was unavoidably but temporarily involved in non-operational activities. This could have course have been a deliberate misreading of the matter, a contention supported by Air Ministry behaviour to date. It could also, however, have arisen as a result of fundamental differences in approach by the Air Ministry and War Office, generated by their relative dependence upon technology and differing histories. This is a point to which we shall return.

The second reaction to the paper arrived at the War Office the day after Goddard's letter, in a very detailed document from the CLE.⁴⁰ The first half specifically addressed the

paper, by recommending that engineer units be included in the Invasion Corps (presumably by Rock who was a Royal Engineer), and that the reduced one-lift portion of the Corps be altered to include an anti-tank capability. It was also suggested that reconnaissance elements using motor-cycle combinations and scout cars be included in the larger organisation, and that the list of possible missions for the new force be amended in the light of study of likely German airborne action in the event of an invasion of the UK. These included rear attacks in conjunction with conventional assault, isolating the prospective battlefields from the German rear, seizing and holding defiles and river crossings to prevent enemy demolition or retreat, flanking attacks, feint attacks and raids to disrupt German communications. These suggestions are of course eminently sensible, although it is intriguing to note their similarity in wording to those put forward by Major J. T. Godfrey in his 1935 paper "Winged Armies",⁴¹ which in turn bore striking similarities to contemporary Soviet airborne thought.⁴²

It is the second part of the document, consisting of a list of answers to specific questions, which provides evidence that, for its part, the War Office had little idea of what its new airborne force required from the RAF, or indeed the paucity of RAF resources. Thus, the CLE had to point out that there were insufficient Whitleys available to carry two hundred and fifty parachutists and all their kit, even assuming that each Whitley could carry ten passengers.⁴³ It was also pointed out that an increment of that size did not conform to the existing organisation of 11 SAS Battalion. The Fighting Wing of the latter unit was three hundred and seventy two strong, and required thirty-seven Whitleys for a single lift. The CLE also informed the War Office that speculation on glider numbers was "pie in the sky" because the necessary gliders were not yet built, although it did offer some very provisional estimates based upon the War Office paper; one hundred and sixty-three twenty-five seaters, and sixteen tank carriers.

The following comments were less blunt, if equally negative. The CLE were thus unable to estimate accurately the number of glider pilots required, but suggested a ceiling of three hundred and thirty-four, whilst stressing that this would merely be to lift the proposed Army force and not for airborne forces as a whole. The CLE also considered the light anti-aircraft component of the Army's requirement problematic, because the Bofors AA gun was too tall and heavy for existing glider designs, a rather surprising lapse on the Army's part, given its ongoing mauling at the hands of the *Luftwaffe*. On the other hand, not all the CLE's responses were doom and gloom. The prospect of lightening the Bofors gun for airborne use was held out, and the availability of an unspecified "four ton carrier" (possibly a Bren-Gun Carrier) meant that it might be possible to equip airborne artillery with a

heavier piece than the 3.7 inch howitzer. It was also recommended that production of that type be pushed at the expense of the projected tank carrier, because it was faster and had less rigid landing requirements due to its smaller size and weight. Nonetheless, the fact that the War Office was raising such matters *after* issuing its airborne requirement suggests a lack of proper research, and that it had therefore put together its requirements without considering their feasibility.

This provides a further indicator of the fundamental differences between the War Office and the Air Ministry approaches to the airborne project, and indeed to operating procedures generally. The Army had become accustomed to developing things on the hoof, arguably as a result of around two centuries of being obliged to operate on a shoestring, at short notice and in a variety of far-flung locations, a tendency reinforced by the relatively low technological level of Army equipment. In this sense, the formation of an airborne force was merely the latest in a long line of forced improvisations, like the formation of Light Infantry units in the 18th century, or of the Machine Corps and Royal Tank Regiment during the First World War. That is not to say that technology was unimportant, quite the opposite as the latter two examples show. However, the Army's primary resource remained the individual soldier, for whom technology was considered an adjunct rather than a *raison d'être*.⁴⁴ The RAF viewed things rather differently. For it, technology, in the shape of its aircraft, *was* the reason for being, and every RAF serviceman was employed at whatever level to assist in the servicing, maintenance and flying of that technology for whatever purpose.

This goes some way to explaining the individual services' widely differing approaches, over and above internal politicking and inter-service rivalries. For the Army, the parachute and glider were merely the latest, albeit unusual, methods of delivering soldiers to the battlefield; thereafter, the troops involved completed whatever mission they had been assigned using the same methods as more conventional soldiers. The airborne troops may have been trained to a higher standard, or equipped with slightly different equipment, but fundamentally they were the same. On the other hand, delivering such troops to the battlefield placed the RAF's *raison d'être*, its aircraft, directly at risk. This explains a whole series of caveats attached by the Air Ministry to its participation in the airborne force from the outset, such as the preference for airborne operations take be launched in darkness,⁴⁵ or its initial insistence that unarmed aircraft were too vulnerable for parachute dropping.⁴⁶ Arguably the most costly example of this was the rigid adherence to the principle that the RAF exercise total control over the flying side of airborne operations. This principle backfired badly at Arnhem, where the senior RAF officer involved in

planning ignored the realities of the ground end of the operation. He thus ruled out a *coup-de-main* on or near the Arnhem road bridge, and placed the landing zones for 1st Airborne Division ridiculously far from its objectives.⁴⁷

These widely differing internal imperatives and attitudes were exacerbated further by mutual incomprehension, if not wilful ignorance, between the Air Ministry and War Office regarding their respective resources, capabilities and intentions generally. This was a direct result of British government policy in the inter-war period that, in pursuit of fiscal savings, deliberately encouraged inter-service rivalry as a divide-and-rule measure at ministerial level.⁴⁸ Not only did this heighten such rivalry to mutually deleterious levels, it also virtually guaranteed rigid compartmentalisation and thus a lack of intercourse between the Army and RAF. This was not the whole story, of course, for the very high level of Army-RAF co-operation which existed in the Empire during the inter-war period shows that personnel from both services were perfectly capable of co-operating for the common good, away from the strictures of Whitehall.⁴⁹ This is further illustrated by the fact that Army-RAF relations at the CLE were generally harmonious, and any discord which did arise was frequently the result of policies set on high. But at the top, old habits died hard, and the results of high-level, mutual ignorance undoubtedly played their part in retarding the inter-service co-operation necessary for the establishment of the British airborne force.

The differing approaches of the Air Ministry and War Office are clearly apparent in the preparation of the joint airborne paper recommended by Goddard for presentation to the Chiefs of Staff. This is particularly the case with a run of correspondence between Goddard and Lieutenant-General Nye; presumably the War Office considered that the matter now merited the attention of a higher rank than Lieutenant-Colonel Stephenson at SD4. This correspondence not only illustrates the differences of approach generally between the two agencies, but also provides further clarification of their respective views of the airborne project, and thus warrants detailed examination.

Nye made the first move, by despatching a detailed draft memo, which he suggested form the basis of the Chiefs of Staff paper, to Goddard on 19 January 1941.⁵⁰ The memo reiterated the size, shape and projected role of the Army's airborne requirement as presented in the paper of 10 January, and added an admission that it was impossible to provide any more than an approximate forecast of its future airborne requirements. These would, however, include the establishment of further airborne training facilities in the Middle East, using paratroops from the UK and glider pilots trained in India. The Air Ministry was requested to investigate the possibility of producing gliders in India as well; a

table of projected glider production figures was included as a separate appendix, which elicited a pencilled comment from Goddard that it contained "all [the] wrong numbers". Nye estimated that "normal" bomber pilots would be able to transfer to flying gliders "...in about two days". This proved wildly optimistic. He also requested that twelve glider pilots be allocated to the CLE on a permanent basis. This number was considered sufficient for both research and development work and as a training cadre. The memo closed with a list of suggestions for future policy. These included establishing the two proposed Invasion Corps, one at Home and one in the Middle East, and readying them for operations as quickly as possible; that the necessary (but unknown) number of gliders be ordered forthwith and stored until needed; and that the Air Ministry form and maintain a pool of bomber-cum-glider pilots in readiness for operations at short notice. It was also suggested that glider pilots for use in India be drawn from RAF personnel serving there; that the establishment of the Middle East training facility be sanctioned pending an examination of possible facilities for glider pilot training in India; and that the General Staff and Air Staff continue to examine airborne problems in conjunction with research and development work at the CLE.

Some of this was reasonable, some less so, and some totally unrealistic. Being unable to provide a specific timetable or organisation for employment was unhelpful, for example. Not only did it play directly into the hands of the obstructionist lobby within the Air Ministry by refusing a seemingly fair request for a projected time scale, it was also unreasonable to expect the RAF to allocate its by no means plentiful resources on the off chance that the War Office might wish to use them. This is particularly true of the request for the formation of a pool of potential glider pilots, and the suggestion that bomber pilots could convert to gliders in two days clearly displays the paucity of War Office knowledge regarding the realities of training pilots of any description. Goddard's response did not appear for seventeen days, a delay which prompted Stephenson to complain to Rock that the "...Air Ministry are being very sticky over the airborne forces Chiefs of Staff paper" in a letter at the end of January 1941.⁵¹

Goddard's reply to Nye's memo actually appeared on 5 February 1941, following internal discussion at the Air Ministry. Medhurst, the Air Ministry's Director of Plans, passed comments to Goddard on 4 February 1941.⁵² The latter opined that the Army proposals were unsatisfactory because they were based upon recent exercises by the CLE at Camberley in Surrey,⁵³ which relied excessively on the German example rather than the British point of view; the latter was unfortunately left unclarified. Medhurst complained further that "...enthusiastic and persuasive representatives from the CLE have also

probably cried their wares too successfully at these exercises”,⁵⁴ to the high ranking observers from both services.⁵⁵ He was also of the opinion that Nye's paper was of no use for formulating the Chiefs of staff paper because it was “divorced from reality”, and because it took no account of other RAF commitments both at Home and overseas.

Medhurst's comments were quoted verbatim in Goddard's response to Nye, which went straight to the point by stating there was no way the Air Ministry could consider using Nye's memo as the basis for the joint paper. Goddard then informed Nye that the Air Ministry was willing to continue with developing and training airborne forces to "form a sound basis on which to build up a suitable organisation when the precise need is clear, and the pilot and aircraft situation permits". The CAS was quoted as being anxious to discuss the future of airborne forces with the CIGS, but progress was unlikely until both parties were able to agree basic principles. Goddard closed on a conciliatory note by pointing out that recent joint discussions had contained little divergence of opinion, that the problem lay in the fact that what the “Air Ministry don't like is committing ourselves to the provision of specific forces to take part in unspecified operations”, and suggested that further discussions be arranged.⁵⁶

Goddard's letter was blunt and to the point by past standards, but Nye's response, which appeared on 7 February 1941, was blunter still. He began by acknowledging that a high level meeting between the respective staffs on formulating the paper for the Chiefs of Staff committee might be a good idea, although he considered there was little point in holding a meeting because the Army and RAF views were:

“...poles apart. My personal reaction is -

a. To Hell with principles – give me the problem

We want to decide either that our Airborne forces are required or that they are not required

If they are required we want to decide on what scale, so that orders for the necessary material may be placed at once with no further delay [original emphasis]... We are faced with a practical problem which demands practical steps to be taken to meet it and a discussion on abstract principles seems to me will not get us anywhere”.⁵⁷

Nye's response highlights perfectly the fundamental difference in the operating philosophies of the Army and RAF. Goddard, however, was not overawed, and replied in equally forthright terms the same day.⁵⁸ He began by acknowledging that the airborne

problem was big and novel, which therefore “couldn't be disposed of by a few snap decisions and a wave of the hand”. The crux of the matter was the War Office's refusal to respond to the specific points in his own paper of 23 December 1940, an action which would allow principles to be established for further development. This comment graphically illustrates the depth of mutual misunderstanding, and is further reinforced by a following query over the necessity for CLE-type facilities in the Middle East and India: “Do any such requirements exist? It is for you to say. This is what we have asked you to say and you give no guidance”. The fact that the War Office had stated their requirement quite clearly would suggest that what the War Office considered to be an operational necessity was viewed by the Air Ministry as a bargaining counter. This may also explain Goddard's comment that the Air Ministry was not convinced of the need for two airborne brigade groups “...now or in 1942”.

Similar narrowness of view framed the Air Ministry's approach to the glider problem. It was felt unwise to place advance orders for gliders before the Chiefs of Staff had ruled on the future of the airborne force, and as the existing gliders had yet to be air tested, holding back on orders would not lengthen the inherent delay. This was perfectly reasonable from a routine aircraft procurement perspective, but contradicted Goddard's request for the Army to provide precise details of their glider requirement for tactical development, and precise details of the numbers of men and types of equipment which they wanted to be carried. There are two major flaws in this, apart from the fact that the War Office paper of 10 January 1941 arguably supplied the requisite information. First, it again reflects the Air Ministry's assumption that the existing airborne establishment was developmental rather than operational, a point not recognised by the War Office. Second, it does not recognise the circular nature of the demand for precise details, insofar as it was impossible for the Army to definitively furnish any such details without unrestricted physical access to the gliders. This was clearly impossible with craft which had yet to be air tested, and the CLE's reservations over the suitability of the Bofors light anti-aircraft gun for carriage by glider illustrates the futility of attempting to proceed with estimates based upon yet more paper estimates.⁵⁹

Blunt as it was, Goddard's letter largely reflected previously stated Air Ministry opinion, with the addition of attempts to place responsibility for the airborne impasse squarely on the shoulders of the War Office. What it termed the stagnation of ideas was blamed on the fact that the War Office would not agree to a realistic airborne build-up for future rather than current need. There were also several references to War Office failure to respond to the Air Ministry paper of 23 December 1940, although the reply on 10 January 1941 would

appear to meet that criterion in content if not precise form. There was also an attempt to pass blame upwards as well. Goddard's closing remark claimed that the outcome of previous discussions had resulted in "...existing commitments being accepted because some of the principal people attending...were not aware of the governing factors and agreed to do impossible things on an unsound basis". This was of course fair comment, although it could be argued that any such ignorance was largely due to the Air Ministry failing to make the governing factors sufficiently clear, for whatever reason.

Frank as it was the exchange between Nye and Goddard merely cast the differences between their respective departments into harsher relief, rather than bringing progress toward the necessary consensus. The Air Ministry felt the War Office was attempting to dragoon it into an ill thought-out and potentially costly venture, whereas the War Office considered the Air Ministry's attitude to be needlessly obstructive. The differences were neatly encapsulated by Stephenson in a letter to Rock on 7 February: "The whole trouble with the Air Ministry is that they love to discuss a policy on a basis of its limitations and restrictions instead of on the basis of what is needed [and] seeing later if it is practicable".⁶⁰

The irony is that Goddard appears to have been not unsympathetic to the airborne cause. His more contentious comments to the Army appear to have arisen largely from relaying the views of others at the Air Ministry, rather than his own. Certainly, his communications on the matter within the Air Ministry were usually fair and balanced, and he also put up a ferocious defence of the CLE against the Vice-Chief of Air Staff even after his heated exchange with Nye. Criticism was levelled against the CLE over its apparently low flying time in January 1941, which totalled only one hundred and fifty flying hours. Goddard responded with a very sharp letter detailing the small size of both the CLE staff and its resources, and cited extenuating circumstances. These included bad weather, disruption of the CLE's normal training programme for special operations training, the lack of gliders and qualified glider instructors, and the fact that the claimed figure took no account of participation by CLE aircraft in joint exercises, which were not logged at the CLE.⁶¹ Whatever his personal view of the airborne project, Goddard appears to have approached it with a high degree of professionalism, and therefore deserves some sympathy, for his stance placed him squarely in the firing line between his own ministry and the War Office.

The upshot of Goddard's exchange with Nye was a joint conference at the Air Ministry on 19 February 1941. This was intended to clarify general co-operation matters between the Army and RAF, but the airborne problem received brief examination. Thus it was

acknowledged that there might have to be some change to the agreed scheme in order to meet the expanded War Office requirement, it was recommended that an order be placed with the Ministry of Aircraft Production for the necessary gliders, although the number was as yet undetermined. It was also agreed that a joint paper should still be prepared for consideration by the Chiefs of Staff, and that formal discussions should be held between the Air Ministry and War Office to produce a satisfactory draft.⁶²

This was progress, albeit limited, and Goddard moved swiftly to capitalise upon it. Goddard distributed a letter of his own to a variety of Air Ministry departments on 26 February 1941, stating that the airborne project was in the balance, and informing them of the meeting and its outcome.⁶³ Appended to it was a longer piece, originally intended to set the matter out in more detail for the CLE's parent Group,⁶⁴ although copies were subsequently passed to the CLE via No. 70 Group, to HQ Bomber Command, the War Office and the Director of Combined Operations.⁶⁵ As well as laying out the current situation, this contained details of measures intended to expedite matters, including research into the suitability of new bomber types for parachuting and glider-towing, modifications to new Whitleys for the same purpose, and measures to expand the current glider pilot training programme.

The 19 February conference also appears to have cleared the air between Goddard and Nye. The latter contacted Goddard in a much more civil letter on 7 March 1941, requesting clarification as where the agreed paper on the airborne force was to originate, in order to avoid duplication of effort.⁶⁶ Goddard's response was prompt and equally conciliatory, including as it did apologies for the delay since the conference, and promising answers as soon as possible. For good measure, he also included an update on the glider situation, informed Nye that Army Co-operation Command had agreed to an expansion of the parachute-training programme. The letter closed with the hope that his efforts were "...not considered dilatory", by pointing out that matters were moving as swiftly as possible at his end, and that he always attempted to meet War Office requirements; the latter point was probably true, from a personal view if not a ministerial one.⁶⁷

In the event, the joint paper was compiled at the Air Ministry. A draft was passed to Stephenson at the War Office by Goddard on 17 March 1940.⁶⁸ This, with some minor alterations,⁶⁹ formed the core of the finished article, which first appeared on 24 March 1941, entitled "Paper on Airborne Policy".⁷⁰ The paper was extremely detailed and, after a brief background summary, was divided into three main sections. The first covered the RAF side of the matter, detailing specific measures taken to date regarding the provision of

aircraft, gliders and pilots (including yet again the questionable assertion that the Whitley was the only aircraft found suitable for parachuting), and a list of additional provision necessary for expansion. The second detailed the Army side of the matter, and consisted of little more than a rehash of Nye's 19 January paper, with a list of factors necessary for its realisation. The final section was a list of specific issues for the Chiefs of Staff Committee to address. These included providing confirmation that an airborne force of the size envisaged by the Army was contemplated, whether more gliders would be required for use in India, and whether a CLE was to be set up in the Middle East and/or India.

The paper may have been finished by 24 March, but it then appears to have lost momentum in the course of being passed around for comment before despatch to the Chiefs of Staff. A copy was only passed to the Assistant Chief of Air Staff for comment on 6 April 1941,⁷¹ for instance, and the paper was not despatched for War Office comment until 12 April.⁷² The proposals in the paper also generated other problems in their own right. The General Staff was obliged to contact the Air Staff directly on 10 April, for example, regarding Treasury "jibbing" at the cost of the glider order placed with the Ministry of Aircraft Production, which was in the region of £8 million. As the General Staff considered themselves and the Air Staff to be on a "...sticky wicket because their [airborne] requirements were not yet finalised", proposals were sought for a joint paper justifying the matter.⁷³

Thus, after ten months, the Air Ministry and War Office were finally moving toward an airborne concensus, although it would be unwise to read too much into this. Both sides were still a long way from unanimity, and it is perfectly possible that progress could have bogged down again in mutual recrimination and backsliding had the Air Ministry and War Office been left to their own devices. Certainly, the Air Ministry side of the Chiefs of Staff policy document shows that it was far from convinced about the need for an airborne force as envisaged by the Army. In the event, however, this turned out to be irrelevant, because outside influences were about to intervene, in the shape of Winston Churchill.

V. Unimpressed with Progress: Churchill's Visit to Ringway, 26 April 1941

Churchill had been instrumental in the establishment of the British airborne force, and had monitored developments, although not particularly closely. Had he done more, it is highly likely that substantial progress would have been achieved earlier. Churchill visited Ringway on the windy Saturday of 26 April 1941, accompanied by Ismay and Air Marshal Sir Arthur Barratt, commander of RAF Army Co-operation Command, where a special

demonstration was laid on for his benefit.⁷⁴ The CLE was well aware that the ongoing impasse between the Air Ministry and War Office over the direction of the airborne force could well end in the whole idea being abandoned. This had been the imperative behind the Tragino Raid two months previously, and it was the fear which obliged all the stops to be pulled out for the Prime Minister's visit, including some shameless stage managing.

Around four hundred paratroops were drawn up for inspection, and demonstrations of ground training and special airborne equipment were arranged in the CLE's two hangars.⁷⁵ Six camouflaged Kirby Kite sport gliders and the first production eight-seat Hotspur were trucked in from the GTS.⁷⁶ The crowning effort was to be a mock assault on Ringway's control tower, with a mass drop by forty-four paratroops using all five of the CLE's serviceable Whitleys. The paratroops were actually Free French trainees, who were drafted in with their instructors merely because they were available. The radio in one of the Whitleys had been rigged into a public address system, with which Wing-Commander Norman intended to give a running commentary.⁷⁷ Not to be outdone, Louis Strange concealed a further hundred troops on the parachute dropping zone on his own initiative, with orders to emerge simultaneously with the dropped men to make the attackers appear more numerous. The day of the demonstration was windy, with gusts up to thirty-five m.p.h., and Strange took additional precautions. He made a private arrangement with the chief pilot, Flight-Lieutenant Fielden, to drop the instructors only on his signal if the wind remained above the official safety limit. This was made covertly to prevent it being countermanded by higher CLE authority.⁷⁸

Predictably, some of these measures almost backfired. The Kite gliders made good landings directly on target, but the Hotspur's assault landing turned into an extremely long glide, due to a combination of pilot inexperience and the machine's sailplane-based design.⁷⁹ Worse, concern over the windspeed had delayed the Whitleys' take-off, which meant that the paratroops in them were obliged to spend a considerable period in dark, cramped and uncomfortable positions. Consequently, when Norman asked the lead aircraft whether it was ready for take-off over the tannoy, the pilot replied "No, I'm not ready to take-off – five of my blighters have fainted!"⁸⁰ Nonetheless, the drop went smoothly despite the wind, although one source claims there were six refusals.⁸¹ This would not have been visible to the spectators.

Churchill appears to have been impressed with the enthusiasm and effort he found at Ringway. An over-enthusiastic colleague injured one participant in an unarmed combat display,⁸² and Wright refers to Churchill ferociously attacking an imaginary enemy with a

fighting knife, presumably a Fairburn-Sykes,⁸³ in an unguarded moment.⁸⁴ He was also subjected to a good deal of sales talk from the CLE staff in between demonstrations. Newnham refers to Harvey, Norman, Strange and Rock expanding "...views, confidences and difficulties to a sympathetic Prime Minister",⁸⁵ and Ward recounts Strange talking animatedly to Churchill following the parachute descent.⁸⁶ Their activities were noted by none-CLE RAF officers. Air Marshal Barratt apparently "...showed some apprehension as to what amount of line-shooting was going on", despite being a supporter of the airborne idea.⁸⁷ Less enthusiastic observers also relayed this back to the Air Ministry, as shown by a subsequent comment from the Air Ministry Director of Plans: "It is unfortunate that the Prime Minister in his visit to the CLE apparently only received the possibly one-sided view of the local enthusiasts."⁸⁸

Churchill was less than impressed with the efforts of the higher echelons who bore responsibility for what he saw. Churchill had gone to Ringway expecting to see something approaching a fully functioning airborne force. Instead, after almost a year, he was presented with a partially trained force of paratroops which numbered less than a tenth of his original requirement, and a glider force consisting of six civilian sport machines and a single purpose-designed one which could carry six men, backed up by a training establishment struggling to maintain the present level of development. His reaction was swift. On 28 April 1940 he passed a demand to Ismay:

"Let me have this day the minute which I wrote in the summer of last year directing that 5,000 Parachute Troops were to be prepared, together with all the minutes of the departments concerned which led to my afterwards agreeing to reduce the number to 500. I shall expect to receive the office files by midnight. Let me have all the present proposals for increasing the Parachute and Glider force together with a timetable of expected results".⁸⁹

Ismay complied, in a letter which reiterated the salient points of the matter since June 1940, including justification for reducing the projected force from the 5,000 figure, and Air Ministry reservations on committing resources to a project without firm outlines.⁹⁰ He attached to it a draft paper from Goddard at the Air Ministry's Department of Military Co-operation, justifying the RAF's actions and position,⁹¹ and a folder of graphs and charts for estimated glider production.⁹²

It took Churchill four weeks to digest this. To his credit, he acknowledged that the blame for the lack of airborne progress rested ultimately, if unfairly, upon him, as his eventual response to Ismay, on 27 May 1941, made clear. It is therefore fitting to give the last word

on the first phase of the establishment of a British airborne force to the man who set the wheels driving in the right direction:

"This is a sad story, and I feel myself greatly to blame for allowing myself to be overborne by the resistance which was offered. One can see how wrongly based these resistances were when we read paragraph 6 of the Air Staff paper in light of what is happening in Crete, and may be soon happening in Cyprus and in Syria.⁹³

See also my minute on gliders.⁹⁴ This is exactly what has happened. The gliders have been produced on the smallest possible scale, and so we have practically now neither parachutists nor the gliders except these 500.

Thus we are always behind-hand the enemy. We ought to have 5,000 parachutists and an Air-borne division on the German model, with any improvements which might suggest themselves from experience. We ought also to have a number of carrier aircraft. These will all be necessary in the Mediterranean fighting of 1942, or earlier if possible. We shall have to try to retake these islands which are being so easily occupied by the enemy. We may be forced to fight in the wide countries of the East, in Persia or Northern Iraq. A whole year has been lost, and I now invite the Chiefs of Staff, so far as is possible, to repair the misfortune.

The whole file is to be brought before the Chiefs of Staff this evening."⁹⁵

The airborne ball was thus placed firmly where it should have been placed originally, in the lap of the Chiefs of Staff, who could monitor the matter properly. Churchill's original error had been to attempt to oversee matters personally which, given the heavy responsibilities of his office, was impractical. He may have assumed that the Air Ministry and War Office could be trusted to address the matter in the way he intended, and that petty rivalries could be put aside for the greater good. If that were the case, then he was sorely mistaken. Thus, although Churchill blamed himself, real responsibility for the lost year rested with the Air Ministry and War Office, irrespective of degree, for his initial requirement, whilst vague, was arguably clear enough to allow a good deal more progress than was actually achieved. This time, however, there could be no excuse for "mistaking" Churchill's airborne requirement, or any doubt of his resolve to see it realised.

Notes

¹ PRO AIR 2/7239, doc. 2A, conference minute sheet, dated 10/06/1940

² quoted from PRO WO 32/4723, doc. 11A, memo from WO Director Military Operations and Planning (DMO&P) to WO Director of Recruiting and Organisation (DRO), dated 12/06/1940

³ A draft paper by Rock, entitled "Training and Organisation of Air-Landed Troops" appears in PRO AIR 32/2, doc. 1A, whilst a finished specimen appears in PRO File AIR 2/7338, doc. 8A. The fact that it is filed

with documents appertaining to the 5 September 1940 airborne conference at the Air Ministry would suggest that it was prepared for the conference, as does the content.

- ⁴ PRO AIR 32/2, doc. 3A, minutes of Air Ministry Conference, 5 September 1940, dated 06/09/1940.
- ⁵ PRO CAB 120/262, doc. 22, list of attendees appended to minutes of "Air Ministry Conference Held on 5 September 1940", dated 07/09/1940
- ⁶ PRO AIR 2/7338, doc. 11C, letter from Ismay to AM VCAS, dated 13/09/1940
- ⁷ PRO WO 193/27, doc. 6A, letter from WO DMO&P to WO DSD, dated 18/09/1940
- ⁸ *ibid.*, docs. 4A & 5A, teleprints from C in C Middle East to WO, dated 16/09/1940
- ⁹ *ibid.*, doc. 8A, teleprint from C in C India to C in C Middle East & WO, dated 04/10/1940
- ¹⁰ PRO AIR 2/7338, doc. 20A, "Agenda for Meeting on Parachute and Glider Troops", dated 02/10/1940
- ¹¹ PRO WO 193/27, doc. 10A, note "Regarding Conference Scheduled for 5 October 1940" to WO DMO&P, dated 04/10/1940
- ¹² two copies of this document were located, both of which were identical; see PRO AIR 2/7338, doc. 22A, conference minutes "Record of Meeting Held 5 October 1940 on Parachute and Glider Troops", dated 06/10/1940; and WO 193/27, doc. 11A, same title and date
- ¹³ PRO AIR 32/2, doc. 4, letter from Stephenson WO MO7 to Rock CLS, dated 10/11/1940; and doc. 4A, list of weights and measures, n.d., attached to doc. 4
- ¹⁴ *ibid.*, doc. 11, letter from Fyffe WO to Rock CLE, dated 22/11/1940. The 3.7 inch howitzer was a light piece designed for mountain warfare, and capable of being broken down into more manageable loads. At the time of writing, an example was on display on the upper level of the Land Warfare Hall at the Imperial War Museum, Duxford, Cambs.
- ¹⁵ *Ibid.*, doc. 12, letter from Fyffe WO to Rock CLE, dated 10/12/1940
- ¹⁶ PRO WO 193/27, doc. 12A, teleprint from WO to C in C Middle East, dated 11/10/1940
- ¹⁷ *ibid.*, doc. 13A, teleprint from C in C Middle East to WO, dated 15/10/1940
- ¹⁸ *ibid.*, doc 14A, teleprint from C in C Middle East to WO, dated 04/12/1940
- ¹⁹ *ibid.*, doc 17A, teleprint from WO to C in C India, dated 29/01/1941
- ²⁰ PRO Air 2/7338, doc. 45A, letter from WO MO7 to AM Plans, dated 11/11/1940
- ²¹ PRO AIR 32/2, doc. 10A, report from CLE to AM, "Brief Appreciation of the Envisaged Functions of an Airborne Force", dated 31/10/1940
- ²² PRO AIR 2/7338, doc. 43A, covering letter for draft from Goddard AM to Harvey CLE, dated 11/11/1940; doc. 43B, letter with comments to above from Harvey CLE to Goddard AM, dated 14/11/1940; and doc. 44A, commented draft from Capel, AM DTO to Goddard, dated 12/11/1940
- ²³ *ibid.*, doc. 48A, covering letter from Goddard AM DMC to AM Plans, dated 23/11/1940; and doc. 48B, minute "Provision of an Airborne Force", dated 16/11/1940
- ²⁴ *ibid.*, doc. 48B, minute "Provision of an Airborne Force", dated 16/11/1940
- ²⁵ quoted from PRO AIR 2/7470, doc. 8B(1) (attached to doc. 8A), letter from AM Director of Plans to VCAS, dated 30/11/1940
- ²⁶ quoted from PRO AIR 2/7338, doc. 53A, "Agenda for Air Ministry Conference 2.45 p.m. 11 December 1940", dated 09/12/1940

- ²⁷ PRO AIR 2/7239, doc. 4A, minute "Development of Parachute Troops – Air Requirements – Conclusions of Conference Held at the Air Ministry June 10 1940", dated 10/06/1940
- ²⁸ i.e., landing a powered aircraft without the benefit of engine power
- ²⁹ quoted from PRO AIR 2/7338, doc. 55"B", "Minutes of Meeting, Air Ministry 11 December 1940, dated 11/12/1940
- ³⁰ *ibid.*, doc. 62A, paper from AM DMC Goddard to various AM recipients, "Provision of Airborne Forces – Air Ministry Aspect", dated 23/12/1940
- ³¹ *ibid.*, doc. 67A, letter from AM DMC Goddard to AM VCAS, dated 31/12/1940; the letter refers to the forwarding of the paper to the War office
- ³² *ibid.*, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachute Training", dated 12/08/1940; and doc. 2A, "Note on Employment of Parachute Troops", dated 31/08/1940
- ³³ *ibid.*, doc. 61A, hand-written letter from DCAS Harris to AM VCAS, dated 24/12/1940
- ³⁴ the War Office appear to have received Goddard's paper on 30 December 1940, given that it is referred to with that date in a later War Office response; see PRO AIR 32/2, doc. 14, paper "Airborne Troops – Policy For", from WO SD4 Stephenson to AM DMC Goddard, dated 10/01/1941
- ³⁵ PRO AIR 2/7338, doc. 67A, letter from Goddard to VCAS, dated 31/12/1940
- ³⁶ PRO AIR 32/2, doc. 14, paper "Airborne Troops – Policy For", from WO SD4 Stephenson to AM DMC Goddard, dated 10/01/1941
- ³⁷ Lt. Col. Stephenson is listed in an earlier document as belonging to WO Plans (MC1); see PRO CAB 120/262, doc. 22, "Conference Minutes to Air Ministry Conference 5 September 1940", dated 07/09/1940. This could be a typing error, could indicate that the Department was renamed in the interim, or that there were two Lt. Col. Stephenson's involved; the first is the likeliest explanation
- ³⁸ PRO CAB 120/262, letter from PM to Ismay, dated 22/06/1940
- ³⁹ PRO AIR 2/7470, doc. 3A, letter from AM DMC Goddard to WO SD4 Stephenson, dated 14/01/1941
- ⁴⁰ PRO AIR 32/2, doc. 15, paper from CLE Ringway to WO SD4 Stephenson, dated 15/01/1941
- ⁴¹ Major J. T. Godfrey, RE, p.s.c., "Winged Armies", *The RUSI Journal* (August 1935), pp. 486-499
- ⁴² see for example A. Algazin, "Aviatsiia v reide MMC", *Vestnik vozdushnovo flota* (No. 10-11, 1931)(Russian language publication), pp. 14-34, especially p. 27; and Glantz, *op cit.*, p. 4
- ⁴³ in fact, Whitleys in involved in the two operational drops using that type, against the Tragino Aqueduct in February 1941 and the Bruneval radar station in February 1942, only carried six paratroops; see Margry, *op cit.*, p. 13; and George Millar, *The Bruneval Raid*, p. 168
- ⁴⁴ this closely parallels the British Army's attitude in the run up to and during the First World War; see Tim Travers, *The Killing Ground*, especially Chapter Three
- ⁴⁵ see for example PRO AIR 2/7239, doc. 4A, "Development of Para Troops [sic] – Air Requirements: Conclusions of Conference Held at the Air Ministry June 10, 1940", dated 10/06/1940
- ⁴⁶ Otway, *op cit.*, p. 22
- ⁴⁷ see for example Martin Middlebrook, *Arnhem 1944*, pp. 17-18
- ⁴⁸ for a more detailed examination of this, see Chapter Two above
- ⁴⁹ see Chapter One above
- ⁵⁰ PRO AIR 2/7470, doc. 4A, letter from Maj.-Gen. Nye DSD WO to Goddard DMC AM, dated 19/01/1941; and doc. 4B, draft memo, n.d., c.19/01/1941

-
- ⁵¹ PRO AIR 32/2, doc. 18, letter from Stephenson SD4 WO to Rock CLE, dated 31/01/1941
- ⁵² PRO AIR 2/7470, doc. 8B(3), letter from Medhurst D Plans AM to Goddard DMC AM, dated 04/02/1940
- ⁵³ for details of CLE involvement in Exercise "Dragon", see PRO AIR 29/512, CLE ORB, entries for 02/01/1941, 04/01/1941, 06/01/1941
- ⁵⁴ PRO AIR 2/7470, doc. 8B(3) (attached to doc. 8A), letter from Medhurst D Plans AM to Goddard DMC AM, dated 04/02/1940
- ⁵⁵ PRO AIR 29/512, CLE ORB, entry for 06/01/1941
- ⁵⁶ PRO AIR 2/7470, doc. 5A, letter from Goddard, DMC AM to Nye, DSD WO, dated 05/02/1941
- ⁵⁷ *ibid.*, doc. 6A, letter from Nye, DSD WO to Goddard, DMC AM, dated 07/02/1941
- ⁵⁸ *ibid.*, doc. 7A, letter from Goddard, DMC AM to Nye, DSD WO, dated 07/02/1941
- ⁵⁹ PRO AIR 32/2, doc. 15, paper from CLE Ringway to WO SD4 Stephenson, dated 15/01/1941
- ⁶⁰ *ibid.*, doc. 20, letter from Stephenson SD4 WO to Rock CLE, dated 07/02/1941
- ⁶¹ PRO AIR 2/7338, doc. 82A, letter from Goddard DMC AM to VCAS AM, dated 11/02/1941. Goddard's claims are supported by the operational records, which makes numerous references to poor weather and participation in exercises. The reference to "special operations" refers to preparations for the Tragino Raid, which tied up the bulk of Ringway's assets for virtually the whole of January; see PRO AIR 29/512, CLE ORB, entries for 01/01/1941 to 30/01/1941
- ⁶² PRO AIR 2/7338, doc. 89A, "Minutes for Meeting at the Air Ministry on 19 February 1941", dated 25/02/1941
- ⁶³ *ibid.*, doc. 85A, letter from Goddard DMC AM to Plans, DTO, DoR, DWC AM, dated 26/02/1941
- ⁶⁴ *ibid.*, doc. 85A, letter from Goddard DMC AM to No. 22 Group, dated 26/02/1941
- ⁶⁵ *ibid.*, doc. 85B, letter from Goddard DMC AM to ACC, HQ Bomber Cmd., No. 70 Group, CLE, WO, DCO, dated 07/03/1941
- ⁶⁶ PRO AIR 2/7470, doc. 12A, letter from Nye, DSD WO to Goddard, DMC AM, dated 07/03/1941
- ⁶⁷ *ibid.*, doc. 13A, letter from Goddard AM to Nye WO, dated 07/03/1941
- ⁶⁸ *ibid.*, doc. 16A, covering letter from Goddard, DMC AM to Stephenson, SD4 WO dated 17/03/1941; and doc. 14A, "Draft of Chiefs of Staff Paper: Policy for Airborne Forces", n.d., c.17/03/1941
- ⁶⁹ *ibid.*, doc. 17A, letter from SD4 WO to AM, dated 17/03/1941
- ⁷⁰ *ibid.*, doc. 18B, "Paper on Airborne Policy", dated 24/03/1941
- ⁷¹ *ibid.*, doc. 19A, covering letter to ACAS(1), dated 06/04/1941
- ⁷² *ibid.*, doc. 21A, covering letter from VCAS AM to VCIGS WO, dated 12/04/1941; and doc. 21B, "Paper on Airborne Policy", dated 12/04/1941
- ⁷³ *ibid.*, doc. 20A, letter from VCIGS WO to VCAS AM, dated 10/04/1941
- ⁷⁴ PRO AIR 29/512, CLE ORB, entry for 26/04/1941
- ⁷⁵ Hearn (Flying Rebel), *op cit.*, p. 122
- ⁷⁶ Wright *op cit.*, p.51; and Ward (The Yorkshire Birdman) *op cit.*, p. 158
- ⁷⁷ Newnham, *op cit.*, pp. 1-5

⁷⁸ Hearn (Flying Rebel), pp. 122-123

⁷⁹ Wright, p. 51; the Hotspur design was based on that of a sailplane, like the German DFS 240, in order to allow long shallow descents. This proved to be tactically flawed, and subsequent glider designs were configured for short, steep approaches. Attempts were made to modify the Hotspur for this, but the machine was relegated to training duties and was not used operationally; see Otway, pp. 390-391

⁸⁰ Newnham, p. 3

⁸¹ *ibid.*, p. 3

⁸² Reg Curtis, *Churchill's Volunteer*, p. 70

⁸³ the Fairburn-Sykes (F-S) fighting knife was designed by two Commando close-combat instructors of those names. The knives were standard issue to Commando and Airborne troops, and the special Airborne-pattern battle dress (BD) trousers incorporated a special snap-fastened pocket for it on the outside of the right leg; see Ladd, *op cit.*, Appendix 3, p.240; and Davis, *op cit.*, p.188, and the plate on p.201, which shows the knife in its special pocket.

⁸⁴ Wright, p.51.

⁸⁵ Newnham, p. 3

⁸⁶ Ward , *op cit.*, pp. 158-159; and Hearn (Flying Rebel), p. 123

⁸⁷ Newnham, p. 3

⁸⁸ PRO AIR 2/7470, File Minute Sheet, Note 25, n.d.

⁸⁹ PRO CAB 120/262, letter from PM to Ismay, dated 28/04/1941

⁹⁰ PRO AIR 2/7470, doc. 23D, letter from Ismay to PM, dated 28/04/1941

⁹¹ *ibid.*, doc. 23E, draft paper "Note on the Development of Airborne Forces", dated 29/04/1941

⁹² *ibid.*, doc. 23C, graphs & charts, dated 11/03/1941

⁹³ this is presumably a reference to the draft Chiefs of Staff paper by Goddard, which repeated the frequent Air Ministry view that German success with airborne troops stemmed from a combination of surprise, which had now worn off, and poor quality resistance, which was not the case at Crete as it had been in the Low Countries the previous year; for the paper, see PRO AIR 2/7470, doc. 14A, "Draft CoS Paper: Policy for Airborne Forces"

⁹⁴ PRO CAB 120/262, letter from PM to Ismay, dated 01/09/1940

⁹⁵ *ibid.*, letter from PM to Ismay, dated 27/05/1941

CHAPTER SEVEN

To the Verge of Adequate Provision: The RAF and the Development of the British Airborne Infrastructure, April 1941 – January 1942

By April 1941, the British airborne infrastructure was in a paradoxical position. On paper, there had certainly been progress. The initial organisation had been reformed into specific departments for administration, parachute training, glider training, and research and development. A basic parachute training course was turning out parachutists for the British Army, the Special Operations Executive (SOE) and a variety of Allied nations, and the fledgling British parachute force had carried out its first live sabotage raid. In practical terms, however, little had changed. The Central Landing Establishment (CLE) remained dependent on a literal handful of unsuitable and increasingly decrepit aircraft, which placed severe limitations upon the work of the CLE's constituent departments. In the case of the Parachute Training School (PTS), this was exacerbated by a shortage of parachutes and qualified instructors, while the Glider Training Squadron (GTS) remained reliant upon a handful of camouflaged civilian sailplanes and pre-production Airspeed Hotspur gliders. Consequently, ten months after the order to create a large-scale British airborne force had been given, the CLE remained incapable of providing training for more than a handful of trainees, and then only up to a very basic standard.

Within a further nine months, the situation had been drastically reversed, albeit mostly on the parachute side. The PTS had metamorphosed into a truly mass training organisation, which by January 1942 had provided basic parachute training for an entire British parachute brigade and a large number of Allied personnel, and was poised to proceed with an advanced training schedule. Glider progress, which was hamstrung by a lack of suitable machines, was less spectacular, although this too changed for the better in the course of 1942. Thus the glider force was able to launch its first live operation, a raid into Norway, in November that year.¹ There was no single reason for this shift in airborne fortune. Rather, it resulted from several congruent sources involving RAF personnel and attitudes, at Ringway and elsewhere. This chapter will therefore concentrate upon the RAF side of matters after Churchill's visit to Ringway. It will show how the airborne idea received increasing support from within the RAF as its existence, requirements and potential became more widely recognised within that service. It will examine efforts by Ringway staff to circumvent their problems, argue that bureaucratic inertia, as well a deliberate obstructionism, became an important factor in the tardy response in providing the CLE with the resources it needed, and show how these resources were finally obtained. It will

also reveal a factor which is rarely, if ever, acknowledged overtly in the primary or secondary material; the appearance of empire building within the CLE. Finally, it will detail how the airborne infrastructure became absorbed into the body of the RAF, and how it lost much of its original autonomy in the process. Before moving on to this, however, it will first be necessary to place Churchill's April visit in its proper context.

Churchill's visit to Ringway on 26 April 1941 was undoubtedly the second watershed in the establishment of a British airborne force, the first being his original insistence on the creation of such a force. However, it would be overstating the case to say that he was solely responsible for breathing new life into a stymied project, as many of the secondary accounts, and particularly those from a CLE perspective, suggest. It would be more accurate to say that Churchill's intervention lent additional impetus to a process which was already underway, albeit slowly and not particularly efficiently. His involvement in April 1941 therefore replicated his original parachute directives in June 1940, which had the same effect upon pre-existing but low-key Air Ministry and War Office consideration of the airborne idea.

There is evidence to support this view. Consider, for example, the response to Churchill's unfavourable reaction to what he found at Ringway. The Air Ministry was extremely quick off the mark when Ismay relayed the Prime Minister's Churchill's testy demand for all paperwork appertaining to the airborne project.² Within twenty-four hours a very detailed paper was drafted, accompanied by graphs and charts for projected glider production.³ The paper included a précis of progress to date as requested, justified downsizing the original parachute requirement, and detailed measures in hand. Predictably, given the Air Ministry's stated preference, the paper concentrated on gliders, and particularly on the new Airspeed Hotspur. Measures to rectify faults discovered in the pre-production machines were detailed, and much was made of the planned delivery schedule. Seventeen Hotspurs were slated for delivery in May 1941, four hundred by February 1942, and a prototype fifteen-seat machine was also expected in May 1941.⁴

The speed with which this very detailed document was produced inevitably raises the suspicion that the Air Ministry had prepared it in advance, as a measure to deflect possible criticism. Given the Air Ministry's undoubted mastery of the bureaucratic game, this is perfectly feasible. On the other hand, it could also indicate that at least some departments within the Air Ministry were following airborne developments closely, and had the necessary information immediately to hand. This supports rather better the suggestion that Churchill's intervention hastened ongoing efforts rather than initiated them. The relative

paucity of activity, and the leisurely pace of that which did occur in the immediate aftermath of Churchill's visit, provides further evidence to support this line. Drafts for a Chiefs of Staff paper on the airborne force were not circulated until mid-May 1941,⁵ and an interim report only appeared on 31 May 1941,⁶ four days after the Prime Minister issued his appeal for the Chiefs of Staff to "...repair the [airborne] misfortune".⁷ Further evidence can be found in the records from less exalted levels, where in some instances Churchill's April demands created confusion by returning to matters which many departments considered resolved. RAF Army Co-operation Command, for example, responded to an enquiry from the Director of Military Co-operation in early May 1941 by pointing out that it had dealt with the same enquiry in March 1941,⁸ and again on 29 April 1941; a copy of the latter document was attached as proof.⁹

It is therefore difficult to quantify precisely the impact of Churchill's intervention in April and May 1941 solely on the basis of primary documentation. This does not diminish its importance, which can be measured from subsequent airborne developments over the next seven months. It does, however, put his contribution into context, and illustrates that the situation was more complex than is routinely portrayed. Churchill's intervention undoubtedly impacted most at high level, because that was where his influence could best be brought to bear. His reaffirmation of support for airborne project was thus arguably sufficient on its own, for it made it clear that the idea would not be allowed simply to fade away. It also provided useful support for the War Office in its subsequent struggles with the Air Ministry over expansion of the airborne force. Unfortunately, Churchill's influence was less noticeable at lower levels, and particularly at the CLE. This was ironic, given that it was Churchill's visit to Ringway that sparked his intervention, but the fact remains that there was still a considerable lag before the benefits of the Prime Minister's intervention became apparent at the airborne coalface.

1. A Shift in Attitude: The Growth of Support for the Airborne Project Within the RAF

For the first six months of its existence, Ringway was handicapped by a lack of support from higher in its chain of command. This did not stem from Air-Marshal Barratt, head of RAF Army Co-operation Command, and the Director of Military Co-operation, Group-Captain Goddard, who were broadly supportive of the project, within the parameters set by their other responsibilities. Goddard's letter to Barratt on 7 March 1941, for example, illustrates this.¹⁰ The failure stemmed from No. 22 Group, Ringway's immediate superior formation, which remained lukewarm about its responsibility. This changed for the better

when responsibility for the CLE passed to No. 70 Group, commanded by Air-Commodore Cole-Hamilton. Cole-Hamilton visited Ringway on 1 January 1941, and assumed his new responsibilities shortly thereafter.¹¹

No. 70 Group entered into the task of overseeing the CLE with commendable enthusiasm. On 3 March 1941 it began lobbying to obtain more personnel for the CLE, which Ringway had been requesting without success for several months,¹² and eleven days later weighed in to assist the GTS in gathering its promised resources.¹³ Goddard's 7 March 1941 letter to Army Co-operation Command prompted No. 70 Group to investigate aircraft provision for Ringway. This included authorising, or at least tolerating, "unofficial" CLE inspections of some types.¹⁴ The results of these investigations were passed to RAF Army Co-operation Command on 9 April 1941, with a refreshingly candid précis of airborne progress to date. Cole-Hamilton cut straight to the heart of the matter by directly challenging the Air Ministry line on the provision of aircraft for the airborne project, which decreed that parachute dropping had to be an alternative, and therefore ancillary, role for bombers. No. 22 Group was bluntly criticised for slavishly following the Air Ministry line in this regard. Cole-Hamilton then cited the vital part that dedicated transport aircraft had played in *Luftwaffe* airborne operations as evidence for reassessing the suitability of aircraft previously denied the CLE.¹⁵

Predictably, No. 70 Group's forthright reporting caused waves at the Air Ministry. Not all of these were negative, with one staff officer at the Air Ministry supporting the challenge to the party line on transport aircraft policy. An internal Air Ministry memo on 2 June 1941 recommended that Britain should "cease playing" with airborne forces, and suggested that if it really was impossible to produce dedicated transport aircraft, the project was unfeasible and should be abandoned. RAF Army Co-operation Command was criticised for failing to push the matter on an official basis, and the Air Ministry's insistence that current aircraft production restrictions precluded building transport aircraft was also comprehensively rejected. The memo pointed out that the Blackburn Botha had remained in production for a full year after it was known to be unsuitable, that the resources thus wasted would have been better spent on producing aircraft for airborne use, and claimed that the Air Ministry was in fact wasting production effort on too many different types of bomber. The memo closed by suggesting that the possibility of acquiring transport aircraft from the US should be re-investigated, and ended:

“I appreciate that the whole question is one of relative priorities, but in view of the course of the war to date, I should have thought the importance of transport aircraft to the Army was too obvious to need arguing”.¹⁶

Whether this memo reached No. 70 Group is unclear. Cole-Hamilton, however, was not merely content to pass his views up the chain of command on paper. On 24 August 1941 he took the opportunity of pushing the CLE's cause in a non-agenda addition to an Air Ministry conference called to discuss the provision and training of RAF for the airborne force. Cole-Hamilton cited serious shortfalls in the development and production of gliders, and questioned the viability of the Air Ministry's glider production schedule. He also pointed out that the provision and modification of bombers for parachuting and glider-towing was also seriously behind projected progress, and that under-resourcing at the PTS was threatening both the viability of the fledgling parachute force, and the projected expansion of that force at home and in India. The CLE, in Cole-Hamilton's considered opinion, was being kept in the dark, and required information as soon as possible if it were to carry out its appointed tasks.¹⁷

Cole-Hamilton's support for his new charge at Ringway was not only courageous, but also self-effacing. No. 70 Group passed a copy of the minutes of the 22 August conference to the CLE at the end of that month, accompanied by a covering letter; this did not mention Cole-Hamilton's unscheduled intervention at all.¹⁸ It is intriguing to speculate on what might have happened had Louis Strange received a similar level of support from No. 22 Group a year previously. Be that as it may, the point here is that from the beginning of 1941, the lines of communication linking the CLE to the rest of the RAF were finally functioning properly. In the long term, this turned out to be a double-edged sword for the CLE. No. 70 Group's support was not provided without strings, a development covered more fully below.

II. The Ongoing Stumbling Block: The Search for Aircraft for the CLE

The most critical problem facing the CLE from the outset was the lack of aircraft. The twenty-one additional machines promised to Ringway in June 1940 failed to materialise, leaving the CLE reliant in April 1941 upon the original six Whitley bombers posted there ten months previously.¹⁹ This provision was clearly inadequate to provide basic parachute training, and the shortage was exacerbated by a host of other factors. First, there was an open-ended commitment to provide basic parachute training for SOE and foreign personnel, with the latter being by the far the larger of the two.²⁰ Polish personnel began to arrive at Ringway from the end of October 1940,²¹ followed by larger groups from early

March 1941.²² Free French trainees were also present at the PTS from 13 February 1941, and were inspected there by de Gaulle in early March.²³ Second, there was the matter of aircraft serviceability. In a paper on 12 June 1941, for example, the CLE pointed out that of the six Whitleys on establishment, there were rarely more than five in serviceable condition, and usually only three under normal training routine.²⁴ Instances of engine failure in the air were not unknown. Much of the problem was due to the fact the CLE's Whitleys were equipped with Armstrong Siddeley Tiger powerplants, rather than the more powerful and reliable Roll-Royce Merlin units used on Whitley Mark IVs and after. Obtaining spare parts for the Tiger units became increasingly problematic as time went on.²⁵

Third, the CLE's aircraft required frequent modification, which inevitably cut into flying time. This was largely carried out in-house by the CLE's Development Unit (DU), but the aircraft still had to be withdrawn from flying duties for the work to be completed.²⁶ Examples of these modifications were the fitting of tail-wheel spats to prevent parachutes fouling them, which was carried out on all the CLE's Whitleys, beginning on 16 November 1940, and the fitting of doors to cover the static-line attachment point, which was carried out the following month.²⁷ Fourth, the CLE was reliant on its Whitleys for research and development work on behalf of the DU. New or modified items, like parachutes or supply containers, could only be tested properly by dropping them from an aircraft, and the CLE's Whitleys were the only properly configured aircraft available.²⁸ Finally, in addition to all this, Ringway also expected provide a host of ancillary services in addition to basic parachute training. These included advanced parachute training, providing aircraft for the trained parachute cadre to participate in proliferating joint exercises with the Army and Home Guard, and for VIP demonstrations.

It is clear from this that the CLE's need for additional aircraft was more pressing than ever, but this cut little ice with the Air Ministry, which continued to promise little and provide less. This is clear from the limited concessions that combined pressure from No. 70 Group, the Director of Military Co-operation and RAF Army Co-operation Command was able to produce by 7 March 1941. Prior requests were about to bear fruit, with the imminent delivery of new Whitleys with factory-fitted parachute modifications, although these were all slated for Bomber Command squadrons and not Ringway. The Air Ministry also granted permission for Ringway to investigate the suitability of the Vickers Wellington as a back-up parachute transport, with a single example being allotted to the CLE for tests. Apart from this, all the Air Ministry was offering was an agreement to allow Bomber Command to assess the suitability of new aircraft, including the Short

Stirling, Avro Manchester and Handley Page Halifax, for parachuting.²⁹ Bomber Command was also empowered to allow the CLE access to these aircraft, at its own discretion. Significantly, no guarantees were given in the event of all or any of these types proving suitable. As the Director of Military Co-operation took pains to stress, access did not constitute envisaged "...allotment of aircraft to the CLE, and should not take precedence over operational requirements".³⁰

Quite how Bomber Command was to assess these new bomber aircraft for airborne suitability without reference to the CLE was not explained, especially as Ringway was the only establishment qualified to carry out such an assessment. In the event, the CLE had already taken matters into their own hands without awaiting Air Ministry permission. The CLE's deputy commander, Wing-Commander Norman, inspected the Stirling on 1 January 1941 at Shorts' factory, and used the same route to inspect the Avro Manchester, prototype Avro Lancaster and the Handley Page Halifax, on 27 and 31 March 1941 respectively. His findings gave little grounds for optimism. The Stirling suffered from pre-existing centre of gravity problems, and was thus considered the "least promising". Balance problems were also thought likely with the Manchester/Lancaster, and all three types also had prohibitively high stalling speeds for dropping parachutists.³¹ The Halifax appeared more suitable. It had six large wing cells, which were ideal for carrying containers, the four-engine lay-out allowed the pilot to minimise the slipstream when dropping parachutists by throttling back the inboard engines, and the manufacturer offered to provide a wooden mock-up fuselage for troop trials. In Norman's opinion, the Halifax would nonetheless require considerable modification, including the re-positioning of gun turrets, bomb racks and ammunition stowage.³² He therefore recommended that Ringway obtain an example for tests.³³

CLE personnel also gained access to a further aircraft type, and their conclusions cast serious doubt on the Air Ministry's trustworthiness and/or competence. The Air Ministry had rejected the De Havilland Flamingo airliner, known in its military guise as the Hertfordshire, as unsuitable for parachuting in August 1940.³⁴ The CLE, with the connivance of No. 70 Group, gained access to a surviving example of this type at the De Havilland works at Hatfield on 5 April 1941.³⁵ Its findings directly contradicted the Air Ministry's. According to the report passed to No. 70 Group, "...subject to modifications...the Hertford [sic] appears the most suitable aircraft yet inspected, taking all Army requirements into account". The Air Ministry had cited the machine's small exit door as the main reason for rejecting the Hertfordshire in 1940. The CLE considered this to be easily modified. It also found the aircraft to be stable, with a high cruising and low

stalling speed, and to have ample space for up to sixteen parachutists or a comparable load of freight.³⁶

It is possible that the Air Ministry made a genuine mistake when inspecting the Hertfordshire, given that there was virtually no experience on which to base an assessment in August 1940. However, even if that were the case, it does not excuse the Air Ministry for not reconsidering the type later, when the requisite experience had been accrued. It is therefore far more likely that the Air Ministry's main motivation in rejecting the Hertfordshire was to avoid diverting resources from bomber construction to produce a transport aircraft. The fact that the formwork for constructing the Hertfordshire was being broken up as surplus to requirements at Hatfield at the time of the CLE's inspection reinforces this conclusion. It is doubtful that the CLE staff had much faith in the 7 March 1941 assurances from the Air Ministry, but bringing the full facts of the Hertfordshire story to light must have lowered it yet further.

Depressing as the series of aircraft inspections prompted by No. 70 Group were, they at least clarified one point. If the CLE were going to obtain additional aircraft, they would have to be Whitleys, however unsuitable they might have been, or Wellingtons. A detailed report on the suitability of the Wellington appeared in mid-May 1941, and concluded that the type was suitable for parachuting with modifications comparable to those on the Whitley. In particular, the roomier and lighter fuselage was considered much better for troop morale, although its higher speed caused wider ground dispersion during stick jumps. The report was compiled by the CLE on 12 May 1941, from data gathered from tests that began at the beginning of that month.³⁷

In fairness, it must be pointed out that the Air Ministry's reluctance to supply aircraft to the CLE was not based solely on inter-service rivalry, dogma or sheer bloody-mindedness. Bomber Command was the only home-based British force engaged in offensive action at this time, however imperfectly,³⁸ and the Air Ministry's concern that its resources should not be diverted away unless absolutely necessary is perfectly understandable, and legitimate. The unfortunate fact for Ringway was that the Whitley and Wellington were not just the only aircraft in service suitable for airborne use, they were also the current mainstays of Bomber Command. In December 1940, for example, Whitleys and Wellingtons comprised ninety-six of the one hundred and thirty four bombers (thirty-five Whitleys and sixty-one Wellingtons) despatched for a major strike against the German industrial city of Mannheim,³⁹ and the situation remained largely the same throughout 1941. That November, when Ringway was expanding its output to one

hundred parachute trainees per week, a major raid on Berlin included one hundred and one Wellingtons and forty-two Whitleys in the total force of one hundred and sixty-nine.⁴⁰ No wonder then that Ringway failed to get any Wellingtons apart from their test example, and that the pro-bombing lobby within the Air Ministry was prepared to be extremely economical with the truth in order to keep its Whitleys. Given this, it is doubly ironic that Churchill had been promoting the bomber offensive against Germany since November 1940, and with the same degree of enthusiasm he exhibited for airborne forces.⁴¹

Of course, it is doubtful if the re-direction of the handful of aircraft the CLE were asking for would have made any difference to the strategic bombing effort. It is therefore more likely that Bomber Command and the Air Ministry were motivated by a desire to avoid setting an unfavourable precedent, rather than with the specific fate of a handful of aircraft. This is reinforced by the fact that there were surplus machines around. These were not part of a secret Air Ministry stockpile intended to deny them to Ringway, however. Rather, they were "lost" within the machinery of the RAF, and kept there out of reach of Ringway and Bomber Command by a combination of bureaucratic inertia and indifference, which slowed and exacerbated the most well intentioned initiatives from on high. Churchill himself referred to the Air Ministry as a "most cumbrous and ill-working administrative machine",⁴² and whilst the target of his displeasure may have been no worse than the War Office and Admiralty, his assessment was absolutely accurate in this instance.

The CLE was certainly no stranger to the RAF's institutional inertia and indifference. On 12 June 1941, RAF Army Co-operation Command passed on an enquiry via No. 70 Group asking whether the CLE still had any use for two parachute-modified Whitleys, which had been authorised by the Air Ministry, but not delivered, for tests in February 1941.⁴³ This was the same day that the CLE issued its paper highlighting the decrepitude of its existing aircraft, and the dire need for more.⁴⁴ This combination of ignorance and indifference to the realities of life at Ringway was by no means restricted to paperwork. On 1 June 1941, the CLE took delivery of a Whitley Mark III aircraft, which was to be broken down for the fuselage to be used for ground, or synthetic, training. However, on inspection at Ringway the aircraft was found to be airworthy, and enquiries to the machine's former owners at No. 41 Group confirmed that it had indeed been despatched for disposal in an airworthy condition.

As a result, Group-Captain Harvey requested permission from No. 70 Group on 26 June 1941 to exchange it for one of the CLE's original aircraft, which had recently been written-off in a crash. In the process he highlighted the irony "...that a ground training machine is

in far better condition than the ones actually used on flying training [by the CLE] despite the fact that every effort has been made by all concerned to obtain suitable replacements".⁴⁵ No. 70 Group took three days to pass Harvey's request to RAF Army Co-operation Command, which it did on 29 June 1941.⁴⁶ RAF Army Co-operation Command sat on the request for ten days, and then asked No. 43 Group to inspect the Whitley and confirm its airworthiness.⁴⁷ No. 43 Group moved rather faster, and personnel from No. 75 Maintenance Unit (MU) at RAF Wimslow inspected the machine on 10 July 1940. They reported that "Whitley K8991 is a perfectly serviceable aircraft and is suitable in every respect for flying duties [and] for modification to meet the requirements of PTS Ringway".⁴⁸ No. 43 Group relayed this verdict back to RAF Army Co-operation Command,⁴⁹ who then informed No. 70 Group that "channels had been activated to complete the requested exchange on an official basis", with the rider that repairs to the crashed Whitley were to cease forthwith. The same letter added insult to injury by informing the CLE that Whitley K8991 had been discarded in an airworthy condition by an Operational Training Unit (OTU) because "...they had no further use for a Whitley Mark III aircraft".⁵⁰

Final permission to effect the exchange, and for the CLE to retain both airframes for flying and synthetic duties, finally arrived on 17 July 1941.⁵¹ This meant it had taken six weeks to carry out a simple exchange of a serviceable aircraft for an unserviceable one at the same location. Two further points should also be noted. First, it took the CLE twenty-six days to confirm that the machine in question was airworthy, and to request permission to effect the exchange. Second, RAF departments that were sympathetic, or at least neutral, toward the CLE handled the matter in its entirety, and it still took over three weeks from the date Ringway requested permission for the exchange. This illustrates the potential that existed for bureaucratic obstructionism within the RAF machinery, although it is interesting to see that the neutral departments moved with greater speed than Ringway and its immediate superiors.

Whitley K8991 was not the only surplus machine located by the CLE. Harvey's response to being granted permission to use the latter aircraft was to badger No. 70 Group for more, and to inform them of another surplus Whitley located by staff at the CLE. Flight-Lieutenant Williams, from the CLE's DU, discovered a Whitley Mark III standing idle at RAF Kemble. Enquiries on the spot revealed that that it had been left in the open for approximately nine months, during which it had sustained weather damage to its fabric surfaces. The unit to which the Whitley was assigned lacked engine parts to effect repairs,

considered it surplus to requirements, and told Williams that they would be happy to have it off their hands.

When informed of this on 15 July 1941, Harvey immediately attempted to obtain it through official channels.⁵² On this occasion RAF bureaucracy moved rather more quickly, and the matter was resolved within a week, albeit not in the way the CLE would have preferred. On 17 July, RAF Kemble informed the CLE that the Whitley was officially assigned to a gunnery school at Porthcawl in South Wales, and provided its maintenance records.⁵³ Despite the fact that it had been standing idle for the better part of a year, however, officialdom ruled that it was "impossible" for it to be re-assigned to the CLE on 18 July 1941.⁵⁴ No. 70 Group took up the matter on behalf of Ringway on 19 July 1941,⁵⁵ but with no more success than Harvey. The CLE did not get the aircraft, with the decision being ruled final on 21 July 1941.⁵⁶

Thus the CLE had literally stumbled across two surplus Whitleys within a matter of days. It would be convenient to ascribe this to deliberate obstructionism on the part of the Air Ministry, but the evidence does not support that. It is clear that the aircraft concerned had in fact fallen through the cracks in the RAF's administrative machinery. This does not totally absolve the Air Ministry from blame, however, for it clearly shows that the Air Ministry effort to locate additional Whitleys for the CLE was minimal at best. Given that the CLE was able to locate two surplus aircraft by accident, it is reasonable and logical to assume that there were more similarly awaiting discovery. Also, both the machines were Tiger powered Mark IIIs, and were not assigned to operational Bomber Command units, presumably because of the engine spares problems cited above. If OTUs and Gunnery Schools were willing to have such machines scrapped or left to rot in the weather, it would have cost the Air Ministry nothing to order all Whitley Mark IIIs assigned to Ringway. Indeed, it could have been presented as a gesture of goodwill, and gone some way to relieving the pressure upon the Air Ministry. As it was, slackness was to cost it considerably more, for when higher authority finally forced the Air Ministry to provide Ringway with more aircraft, the most modern Whitley Mark Vs were specified. The next section will detail how this considerable turnabout was achieved.

III. Pressure from Above Succeeds Where Pressure from Below Failed: Air Ministry Concessions to the Airborne Force

Ultimately, it was pressure from above that forced the Air Ministry to meet its self-formulated obligations to the CLE. This can be viewed as proof of Churchill's high level pressure bearing fruit, albeit after a delay. On 4 June 1941, RAF Army Co-operation

Command informed No. 70 Group that discussions were underway between the Air Ministry and War Office, with a view to significantly increasing the size of the British airborne force.⁵⁷ No. 70 Group passed this on to the CLE the next day, with the request that Ringway prepare to implement the expansion forthwith.⁵⁸ Group-Captain Harvey's response was swift and blunt. To date, the PTS had trained six hundred parachutists for the British Army, and a total of two hundred and fifty foreign and SOE personnel. At that rate, and with existing resources, it would take until January 1943 to train a further 5,000 parachutists, as per Ringway's original brief. Even then, this schedule was dependent upon the CLE ceasing participation in joint exercises and demonstrations immediately, and the provision of a full Group of Whitleys.⁵⁹

Harvey was pitching things high with his request for an entire Bomber Group, but his forthright response had the desired effect, for No. 70 Group requested that the CLE set its views down on paper for upward transmission.⁶⁰ The result was the CLE's paper of 12 June 1941, entitled "Pilot and Aircraft Requirements for Expanded Output of PTS". This broke down the implications of the one hundred per week expansion in terms of drops per month and flying hours, and moderated the demand for additional aircraft. Twelve Mark II or nine Mark V Whitleys were considered the absolute minimum, the differential being based on the Mark V's longer fuselage and more powerful and reliable Rolls-Royce Merlin engines.⁶¹ Three ratios were employed: one pilot for every three hundred trainees, one Whitley II per three hundred and seventy-five trainees, and one Whitley V per five hundred trainees. It was also stressed that these projections made no provision for aircrew training, modifications or operational exercises, although it was felt that there might be sufficient slack to allow a limited amount of experimentation and work for the SOE.⁶² Ringway produced a training programme based on these projections on 23 June 1941, with a list of additional accommodation and synthetic training requirements.⁶³ A further list of answers to specific questions from No. 70 Group appeared on 27 June 1941.⁶⁴

Before detailing how the CLE met the demand for an expansion of output, it will first be necessary to examine briefly the high level background to those events, for the sake of clarity.⁶⁵ The Army was looking to augment its existing parachute battalion by something in the region of 1,800 soldiers, and by early July 1941 was about to pass detailed proposals for this expansion to the CIGS for approval. Brigadier Nye at the War Office inadvertently passed this fact to the Air Ministry on 4 July 1941. Nye was responding to an enquiry by Air Chief Marshal Freeman as to why the Army had not yet provided the CLE with sufficient trainees to utilise fully Ringway's capacity of one hundred per week.⁶⁶ It is unclear what prompted Freeman's enquiry, for at that time the CLE had not compiled a

definitive list of additional resources necessary for the output expansion, let alone implemented it. However, whatever the motivation, the information elicited by Freeman drew a predictably hostile response from the Air Ministry. The aim of this was twofold; to forestall both the Army's ambitions and the CLE's attempt to increase its resources. The fact was, even at this late stage, some senior members of the Air Ministry hierarchy remained unconvinced that the British airborne project was viable or necessary, and certainly not in the form the War Office envisaged.

However, by the time the Air Ministry's response appeared on 8 August 1941 in a paper entitled "British Airborne Force Policy",⁶⁷ the Air Ministry had decided to make concessions. This was over a month since the Army's intentions had become known, and the content of the paper suggests that there had been intensive argument between the pro and anti airborne lobbies within the Air Ministry. This would explain why the 8 August paper had a rather schizophrenic air to it. The first part basically objected in principle to any enlargement of the airborne force or its training infrastructure, and used every conceivable piece of evidence to support this view. It closed with the opinion that an airborne force configured for anything larger than raiding was a "...luxury that this country, and particularly Bomber Command, cannot afford".⁶⁸

Having purged itself of reactionary opinion, the paper then went on to list a number of far more positive proposals. It was recommended that all responsibility for creating the airborne force be passed to the Army, preferably in the person of a single Army officer. The Air Ministry also suggested supplying enough Whitleys to allow a full battalion lift, and that all Whitley and Halifax pilots in RAF No. 4 and No. 6 Groups receive glider-tow training. The requirement for five hundred dedicated glider pilots was also agreed, and it was suggested that RAF pilots of a low medical category be supplied if the Army was unable to find sufficient personnel itself. Finally, it was recommended that RAF Transport Command should investigate all possible sources of aircraft for parachute dropping and glider towing.⁶⁹ This was significant progress indeed, although the Air Ministry had of course made similar recommendations before and then failed to act upon them. On this occasion, however, the Air Ministry came up with the goods, and Ringway's complement of Whitleys was increased to twelve Mark V machines by 11 October 1941.⁷⁰

The 8 August recommendations were largely confirmed by an internal Air Ministry conference on 22 August 1941. Whilst the offer to supply glider-pilots was withdrawn, this was offset by allotting the CLE's Glider Training Unit (GTU) a larger, but unfinished, airfield at Shobden.⁷¹ The commitment to train RAF aircrew in the necessary specialist

techniques was upheld, and the conference concluded that, dependent upon Bomber Command opinion, it would be possible to withdraw bomber crews for a one-week refresher course at Ringway prior to any large-scale airborne operation.⁷² Bomber Command opinion, when it appeared on 30 August 1941, was lukewarm but broadly agreed with the conference conclusions. Specific caveats concerned the training of aircrew in airborne techniques. The proposal that this take place at their home bases was accepted only because it presented the least potential disruption to bombing operations. The need for an entire week's refresher training was also disputed, with a few flying hours being considered sufficient. Bomber Command also took the opportunity to point out that one, unfortunately unidentified, bomber squadron had already been earmarked for parachute work in the event of an invasion of the UK. There was, however, "...no question of collective exercises with this squadron".⁷³

All this would suggest that the anti-airborne lobby within the RAF had finally accepted that a large-scale British airborne force was a reality that could and would be pushed through, irrespective of their objections. This looks to be particularly the case with the Bomber Command communication of 30 August 1941, which actually post-dated official War Office notification of its intent to expand its existing parachute force by at least two battalions by three days. The new brigade was scheduled to complete formation by 1 October 1941, and the CLE was requested to be ready to implement the one hundred per week training rate with effect from 1 November 1941. Initial parachute training, including that of replacements for routine wastage, was scheduled for completion by the end of January 1942.⁷⁴ The fact that this was passed down to RAF Army Co-operation Command with only a few minor caveats two days later provides further evidence that the Air Ministry was becoming reconciled to the inevitable.⁷⁵

IV. Laying the Foundations: Preparing the PTS for Mass Training, September to November 1941

By the end of August 1941, the way was clear for the CLE to begin planning to increase its output in earnest. To this end, the CLE was reorganised into the Airborne Forces Establishment (AFE) on 1 September 1941,⁷⁶ the major change of which was the concentration of all glider pilot training in a dedicated organisation under RAF Flying Training Command (see Fig. 3). On 4 September 1941 Harvey updated No. 70 Group on the latest thinking from the AFE,⁷⁷ as the CLE had been renamed three days previously. No. 70 Group raised two main difficulties with these recommendations. First, it was considered unreasonable to expand the CLE establishment for the output increase if the

new rate would only be required to train just 2,500 additional paratroops. Second, it doubted the ability of the PTS to maintain the output increase through the winter months, given the notoriously poor weather at Ringway. The latter circumstances, it was argued, would also oblige an increase in synthetic training facilities, for use by parachute trainees during inclement weather.

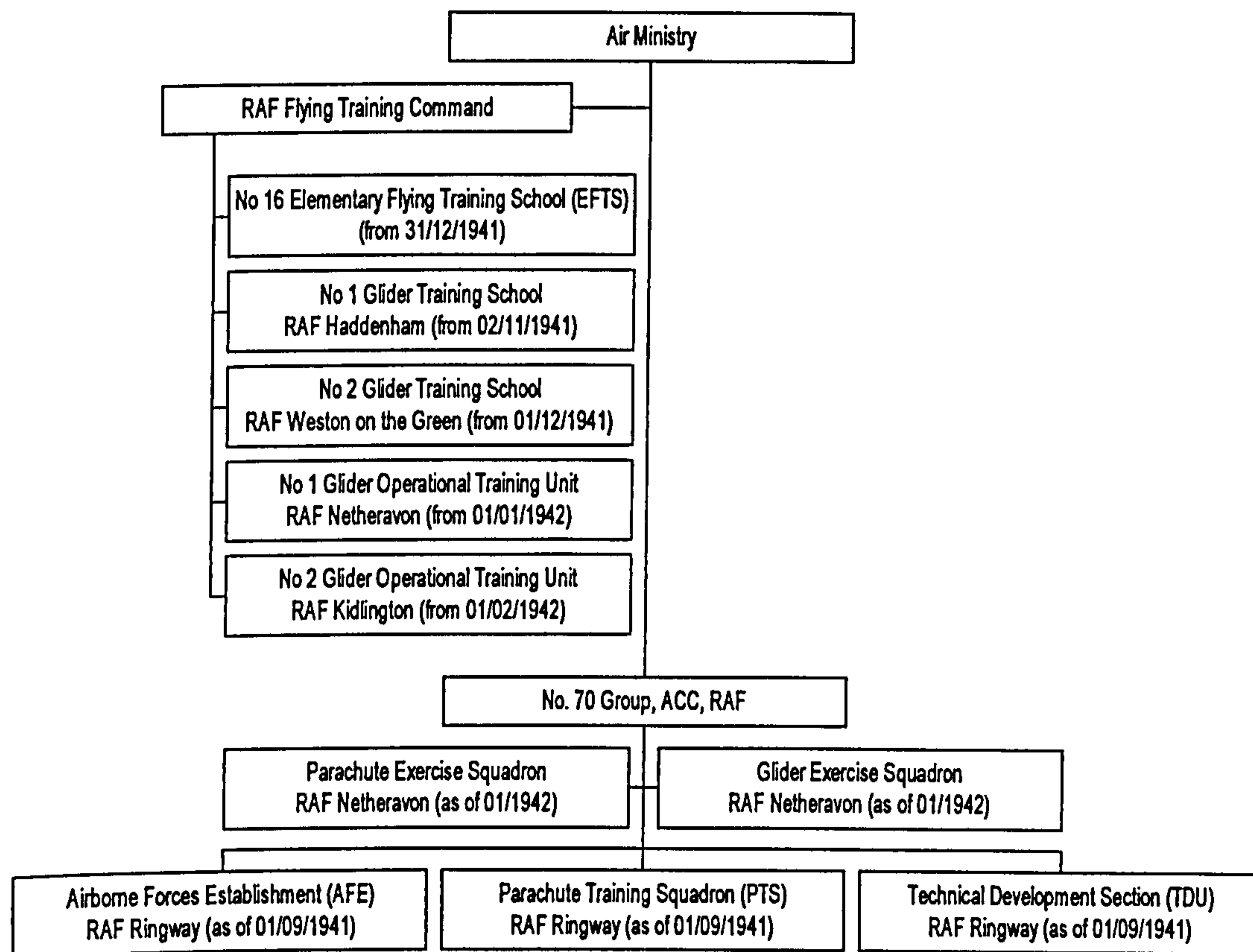


Figure 3 - Airborne Forces Establishment and Glider Training Organisation, beginning 1 September 1941

No. 70 Group's queries, whilst perfectly valid, are interesting for another reason. They show that support for the airborne idea by Ringway's superior was by no means unquestioning, and the same was the case with the next link up the chain. RAF Army Co-operation Command had expressed agreement with the negative sentiments expressed in the Air Ministry paper of 8 August 1941. A covering letter, which RAF Army Co-operation Command attached to the copy of the paper for No. 70 Group, fully supported the Air Ministry's "different concept" for a British airborne force from the German example. This concept, which in effect meant confining the airborne force to raiding, was considered to be entirely appropriate for likely British needs. The letter closed with the following opinion:

"I do not see that we shall ever be in a position to lay off a bomber group from their primary task of bombing to prepare for an operation of this kind [i.e. a

parachute operation] and one has only to instance the delay in the production of gliders and the preparation of an aerodrome which have occurred during the last eight months to bear out this argument".⁷⁸

The upshot of No. 70 Group's queries was a joint conference at the Air Ministry on 9 September 1941,⁷⁹ where Harvey was to present the AFE's expansion proposals in detail.⁸⁰ The head of RAF Army Co-operation Command, Air Marshal Sir Arthur Barratt, chaired the conference.⁸¹ Attendees included Harvey and Rock from the AFE, several Army and RAF officers from Barratt's Command, Cole-Hamilton from No. 70 Group, representatives from a variety of Air Ministry and War Office departments, and the officer selected to command what was to become the 1st Parachute Brigade, Brigadier Richard Gale, MC.⁸² This high-powered gathering was able to make some far-reaching decisions.

First, the role of the PTS was properly defined. Its activities were to be restricted solely to the provision of parachute training, leaving the Army to ensure that trainees were sufficiently fit to undergo that training. To this end, an Army Training Centre (ATC), under Army control but including RAF instructional staff, was to be set up, complete with a balloon. Trainees were not to be billeted at Ringway for parachute training, but were to commute between their own accommodation and Ringway on a daily basis during training at the PTS. The rationale for this was to avoid the delay inherent in constructing sufficient accommodation at Ringway. Small groups of officers and NCOs from the new brigade were to be put through the PTS before mass training commenced, to allow them to act as instructors at the ATC.

Second, the PTS training course was settled at six jumps per trainee, two from a balloon, two individual aircraft jumps, and two stick jumps. If possible, it was planned for at least one of these to take place at night. An intake rate of two hundred trainees every fourteen days was scheduled, utilising twelve Whitleys for parachuting and an Avro Anson for air experience flights. This schedule was planned also to include the training of five replacements per month, and to provide trained paratroopers with a minimum of one aircraft jump every two months to maintain their skills. Other matters discussed included expanding AFE accommodation and facilities at Ringway, the need for additional organisational personnel, and the ongoing shortage and poor serviceability of the AFE's aircraft.⁸³

Events began to move in a more positive direction following the joint conference on 9 September 1941. On 8 October Whitley-equipped No. 41 Group was ordered to release five Whitley Mark Vs and an Avro Anson for use at the AFE, and to replace Ringway's

existing Mark II and IIIs with Mark Vs as the latter became available.⁸⁴ RAF Army Co-operation Command authorised the issue of the additional aircraft to the AFE on 11 October 1941, bringing its total up to the requested twelve,⁸⁵ although this total included the worn out original complement. No. 41 Group reported completion of the five-machine transfer on 12 October 1941.⁸⁶ This was not quite the end of the matter, for Ringway subsequently discovered that some machines from No. 102 Squadron were unmodified for parachuting, and the factory-fitted modifications for parachuting had been removed on others. This required eight hours remedial work per machine, and, although it was admitted that this was not considered an insurmountable problem,⁸⁷ No. 70 Group requested further details in order to avoid similar problems in the future.⁸⁸

On 15 October 1941 No. 70 Group began to chase additional Whitleys to replace the worn out examples on Ringway's behalf, by pointing out that they should be issued within five days if the 1 November deadline were to be achieved.⁸⁹ According to RAF Army Co-operation Command, two Whitley Mark IIIs had been allotted to the AFE on 14 October and were en route, and the Air Ministry was willing to release three Mark Vs direct from the manufacturer, providing the AFE would accept them without parachute modifications. The new machines were unlikely to be delivered by 20 October as requested, however.⁹⁰ In the event, the necessary machines did appear from whatever source, for the 1 November deadline was met, and the first course at the increased output rate of one hundred per week was successfully completed on 15 November 1941.⁹¹

Important as they were, aircraft were not the AFE's sole concern, and a good deal of other equipment was required for training the 1st Parachute Brigade. The AFE requested an additional seven hundred and fifty parachutes to augment its existing stock on 21 September 1941.⁹² The request was passed up the line,⁹³ and arrived at the Air Ministry on 27 September.⁹⁴ By 8 October 1941 arrangements had been made to transfer three hundred and ninety-four parachutes from a variety of RAF MUs, and an additional three hundred and forty-six had been ordered from Irvin and the GQ Parachute Co. The latter order was to be delivered at a rate of fifty per week until the order was fulfilled.⁹⁵ A variety of ancillary items were also required, including one hundred and fifty more protective helmets, at a cost of six shillings and sixpence each.⁹⁶ The helmets were needed to minimise concussion casualties, the majority of which resulted from "ringing the bell" on exit from the Whitley.⁹⁷

Ringway also submitted a detailed request for additional ground training equipment on 5 October 1941. These included swings, jumping stands, trapezes, Whitley fuselages and

mock up bomb-cells for container loading training.⁹⁸ A detailed cost breakdown including everything from screws and nails by the ounce to ropes and man-hours was attached, to the total of £326. 9s. 9d.⁹⁹ By 8 October 1941 the AFE was able to issue an optimistic and very detailed interim progress report. This showed that progress toward the 1 November 1941 deadline for the output increase was well in hand,¹⁰⁰ although more deficiencies were constantly coming to light. On 21 October, for example, Ringway urgently requested three buses, two vans and a prime mover.¹⁰¹ Even with these unexpected deficiencies, however, by 1 November 1941, Ringway was in a position to begin the task Churchill had given the CLS over a year previously: the training of a large scale British parachute force. As we have seen, preparing the infrastructure for this involved a good deal of discord between Ringway and its supporters and other elements within the Air Ministry. This was not, however, confined to the CLE's relations with external agencies, and the emergence of similar tendencies within the airborne infrastructure also merit examination.

V. New Brooms or Empire Building?: Internal Politics at Ringway

There is little mention of internal politics being a factor in the development of the airborne infrastructure. Only one secondary account mentions it explicitly, and the popular and accepted line is one of unity at Ringway in the face of external difficulties. However, matching the secondary accounts with a careful examination of the primary material presents a rather different picture. This picture is one of empire building, patronage, and the shabby treatment of dedicated and courageous men who did not fit into their superiors' vision of the CLE.

Internal politics at Ringway were not an issue before the arrival of Group-Captain Harvey to take command of the newly created CLE on 18 September 1940.¹⁰² Harvey did not approve of Strange's unorthodox methods, nor of the barnstorming mavericks the latter had recruited to the PTS. Consequently, Harvey set about reforming his command in a way more to his liking. Strange's right-hand man, Bruce Williams, was the first of his protégés to be removed. Williams participated in the Tragino Raid of February 1941 as a despatcher,¹⁰³ and unwisely spoke to a British reporter on his return. He was subsequently charged with "unlawful disclosure of classified information", court-martialled, and dismissed from the CLE.¹⁰⁴ The fact that details of the raid were subsequently released for publication in newspapers all over Britain makes Williams' treatment excessive at best, and downright suspicious at worst.¹⁰⁵

Strange himself was next to depart Ringway, posted to the Merchant Shipping Fighter Unit on 12 May 1941.¹⁰⁶ He does not appear to have argued the matter, possibly because he was expecting it, as the following quote from his biography suggests:

“He [Wing-Commander Nigel Norman, deputy commander at the CLE] used to say to me 'You'd better look out Louis...you will go at it bald headed. It attracts too much attention, and you'll find someone taking a pot at you one of these fine days'.¹⁰⁷

This comment implies that Strange's removal originated outside the CLE, but, as second in command at Ringway, Norman must have been well aware of Harvey's dissatisfaction with Strange. This dissatisfaction was clearly expressed in a letter to No. 70 Group on 15 July 1941, which went into some detail on the need to put the CLE's house in order. Harvey considered all the pilots at Ringway had been there “...too long and have never really recovered from the months they had with Strange, in fact the whole Squadron still suffers from the bad effects”. Replacing them would do the CLE “the power of good”, and give over five pilots to the war effort who were young enough to be re-trained. Earl Fielden, the former Cobham's Flying Circus pilot brought in by Strange, was referred to as an old gentleman incapable of giving an order, and therefore incompatible with the expected pressure involved in increasing the output of the PTS.¹⁰⁸ This criticism did not emerge until two months after Strange's departure, which would suggest that Harvey had spent the intervening period attempting, and failing, to bend the existing PTS staff to his will. Harvey then embarked upon a wholesale purge of the PTS, which removed all Strange's appointees and many of those who served under him. The most significant step in this process was the installation of Squadron-Leader Maurice Newnham as head of the PTS from his post as the CLE's administration officer.¹⁰⁹

Strange's immediate successor had been Squadron-Leader Jack Benham, Chief Parachute Instructor at the PTS, who officially assumed command of the PTS on 5 June 1941.¹¹⁰ Benham had been at the PTS virtually from the beginning,¹¹¹ but was superseded by Newnham on 11 July 1941.¹¹² This was a curious substitution because Newnham had no practical experience for the job, his sole involvement with airborne forces being the formulation of measures to repel German airborne attack upon the UK, before transferring to Ringway in a purely administrative capacity.¹¹³ Indeed, he did not make a parachute jump until after his appointment to command the PTS.¹¹⁴ No official reason was given for Benham's sidelining, and his departure is not mentioned in the operational records at all. According to Newnham, Benham pulled strings to obtain a transfer to India to help set up a parachute school within a fortnight of assuming command of the PTS at Ringway. He did

not elaborate upon why Benham sought a transfer from Ringway, but did relate that Benham was subsequently found medically unfit and lost the Indian posting as a result.¹¹⁵

It is therefore logical to assume that Benham was forced out by Harvey or by Newnham with Harvey's tacit approval. This suggestion is reinforced by a comment by Harvey in his 15 July letter to Cole-Hamilton, in which he advised hanging fire on any decision on replacing Fielden until the "...Newnham – Benham fight" was resolved.¹¹⁶ It also fits in with Ward's account, which blames Newnham rather than Harvey for the subsequent removal of Fielden, along with Flight-Lieutenant Romanov and Pilot-Officer MacMonnies, who had also been at the PTS from the beginning.¹¹⁷ It is thus difficult to avoid the conclusion that Newnham was the placeman charged with carrying through Harvey's shake-up of the PTS. It is of course not unusual for a new commander to rearrange a command more to his liking. In this case, however, it appears that Harvey and Newnham were driven by an empire-building impulse in addition to a legitimate wish to remove perceived harmful influences from their commands, not least because many of those so ousted from Ringway continued in airborne-connected service, immediately or later.

Benham, for example, may have been judged medically unfit to command the Indian PTS at Chaklala, but this did not prevent him from continuing to train SOE specials, and indeed dying with them. According to Ward, he was posted missing whilst acting as despatcher for an SOE drop somewhere over Europe,¹¹⁸ an event also recorded by Newnham.¹¹⁹ Bruce Williams went on to serve as a Lysander pilot in Special Operations,¹²⁰ and Strange himself returned to the airborne fold as Wing-Commander Operations for No. 46 Group, one of two dedicated groups for airborne service, in December 1943.¹²¹ Fielden and MacMonnies served with the other dedicated Group, No. 38.¹²²

The purge and substitutions at the PTS did not cease with the removal of Benham and the pilots. According to Ward, he and Bill Hire became marked men after they disagreed with Newnham over extending the length of the PTS basic parachuting course for the one hundred per week output expansion. The prospect of promotion for the two instructors was used as an inducement, to which Hire impolitically reacted by pointing out that the same would therefore apply to Newnham himself. Ward was subsequently posted to Iraq after the arrival of a Newnham protégé earmarked as his replacement,¹²³ but pulled strings at the Air Ministry and became Air liaison Officer to HQ 1st Airborne Division at Netheravon. Hire turned up there shortly thereafter, having been similarly ousted.¹²⁴ All this gives the impression that personnel were removed from Ringway not so much because

of any lack of aptitude or efficiency, but because they simply failed to fit the approved profile of the Ringway hierarchy.

To be fair, it does not appear that this overly affected the capability of Ringway to fulfil its assigned mission, as shown by the fact that the CLE was able to meet the deadline for the War Office's expanded parachute requirement. Newnham, for his part, was aiming to create a "sober and sensible school...[to]... debunk the myths attached to parachuting and reduce it to an everyday affair".¹²⁵ As Newnham saw it, this was best achieved thus: "If...responsibility of the RAF [is] to teach soldiers how to parachute, then it should be done by an RAF staff and kept quite separate from the military part of their training."¹²⁶ This goal was achieved by 1 November 1941, and proved so successful that it has remained the template for British military parachute training ever since.

On the other hand, this must be set against the rather shabby treatment of the original PTS staff, and the fact that such self-serving contrasts badly with Strange's selfless behaviour, whose efforts provided Harvey and Newnham with a sound foundation on which to build their empires. It is fitting to allow Ward the final word on the matter, with his comment upon Strange's removal from Ringway:

"He [Strange] deserves more credit than he ever got for leading that small band of RAF and Army pioneers...It would be easy for some of those who came later to smile at the naivety and some of the inadequacies of the earliest days of airborne training in Britain. They should remember that Louis Strange had *nothing* to build on: they built on *Louis Strange*".¹²⁷

The same could justifiably be said about the efforts of Williams, Benham, Fielden, Romanov, MacMonnies, Hire, Ward and a host of others whose contribution has been similarly overshadowed because what early British airborne history there is has been written largely by Ringway's winners rather than the losers.

VI. Reined In and Regularised: The Airborne Infrastructure, May 1941 – January 1942

The introduction of empire-building and internal politicking to Ringway can be viewed as part of a wider process by which Ringway was regularised and incorporated into the RAF proper. The CLE's early orphan-like status and lack of support from its superior, No. 22 Group, was undoubtedly less than beneficial when it came to obtaining resources. On the other hand, it also allowed the CLE a great deal of autonomy. Equipment problems, for example, were dealt with in-house, such as the parachute modifications carried out following the death of Driver Evans on 25 July 1940, or the testing and provision of the

aperture, static-line attachment points and tail-wheel shrouds to Ringway's Whitleys. It also engendered a free-spirited, barnstorming image which applied to both the original instructional staff and Commando volunteers, which attracted the ire of Rock, and which Harvey and Newnham took such pains to eradicate in the PTS.

However, this autonomy was gradually whittled away over time as the CLE came to be viewed as a permanent establishment by the Air Ministry, and at least one organisation outside it. The Ministry of Aircraft Production (MAP) suggested that a MAP Technical Section be established within the CLE on 8 May 1941.¹²⁸ An internal conference was held at Ringway to discuss the proposal, and a higher level meeting to discuss the matter was recommended by the RAF's Director of Military Co-operation on 13 May 1941.¹²⁹ Overall, response to the MAP proposal was mixed. The CLE reacted positively on 18 May 1941,¹³⁰ although it was already in regular contact with the MAP, particularly with regard to glider production. The introduction of a direct conduit would therefore avoid the inertia and inevitable delay generated by passing communications through several different departments.

No. 70 Group, however, considered the proposal a thinly veiled attempt by MAP to take over the CLE's development function, which was judged to be a "most unsatisfactory idea".¹³¹ No. 70 Group's negative response may have been prompted purely by a desire to protect its subordinate's freedom of action. On the other hand, it may also have been prompted by pique with MAP for contacting the CLE directly rather than through the appropriate channels. Whichever, the proposal was explored further with a whole series of joint discussions beginning with a conference on 22 July 1941,¹³² followed by another in early August.¹³³ MAP involvement in airborne development did increase, particularly after formation of the Airborne Forces Experimental Establishment (AFEE) in February 1942.¹³⁴

Beneficial as it undoubtedly was, its switch from the auspices of No. 22 Group to No. 70 Group nonetheless undermined the CLE's autonomy. No. 70 Group took far more interest in the doings of its subordinate. Previously, accidents and equipment failures had been investigated in-house by the CLE, and any remedial action or equipment modifications similarly initiated and carried through.¹³⁵ In all instances, the cause was tracked down and rectified in a matter of days. The DU, for example, designed, tested and released a locking pin for the snap-hook linking the static-line strop to the parachute pack for general use within a week of a failure causing a fatality in November 1940.¹³⁶

This convenient practice ceased with the death of a Polish PTS trainee, Lieutenant Twardawa, in a parachuting accident on 19 June 1941.¹³⁷ Lieutenant Twardawa's death was caused by a failure of the connection between the strongpoint in the aircraft and the parachute.¹³⁸ No. 70 Group held its own inquiry, using information from the CLE. The outcome, which appeared on 18 July 1941, cleared the despatcher of blame, but criticised PTS instructional procedures and requested recommendations for amending them.¹³⁹ Ringway furnished these on 19 June, in a paper headed "Parachute Dropping". This suggested limiting the number of trainees to eight per sortie, and that all sticks of trainees be accompanied by two RAF instructors, one at the front of the aircraft and one at the rear. Polish sticks were to be accompanied by an additional Polish instructor, to translate where necessary. An RAF instructor was personally to attach trainee static-lines to their respective strops, and to lock the safety pins. This was to be double-checked by each trainee, and completion of the drill was then to be relayed to the pilot before clearance to take-off would be issued.¹⁴⁰

These were reasonable precautions, but No. 70 Group issued a series of additional recommendations to Ringway on 24 July 1941. These included the need to revise standard operating procedures, and to provide additional written instructions in the trainee's native language to avoid potentially fatal misunderstandings. In addition, the CLE was instructed to investigate the current method of attaching the static-line to the aircraft strong-point, with a view to making the snap-hook locking mechanism simpler and foolproof. It was also suggested that a method be devised to allow the trainees to hook-up their own static-lines, thereby making them responsible for their own safety.¹⁴¹ Such external interference was unheard of, and struck a nerve at Ringway. In its defence, the CLE rapidly pointed out that that the snap-hooks used until Lieutenant Twardawa's death were of a pattern approved by the Air Ministry, but not by the CLE, which had introduced the safety locking-pin on its own initiative. It also pointed out that the DU had developed a special connector socket to replace the strop hook in January 1941, which had also been approved by the Air Ministry, but which had yet to arrive from the manufacturer. It was intended to fit these new connectors to all the CLE's aircraft with the assistance of No. 30 MU, and the CLE felt this would solve the problem.¹⁴²

No. 70 Group disagreed, and requested clarification that the new connector would allow trainees to fasten their own static-lines to fixed strops, and whether the connector had been fully tested.¹⁴³ The CLE demurred at the first suggestion, pointing out that this would require longer strops, which in conjunction with the additional movement required would increase the chances of entanglement within the aircraft. This was a very relevant point,

given the cramped dimensions of the Whitley fuselage. With regard to tests upon the new connector, it was confirmed that it had been tested prior to production, and further dummy tests were planned before putting it into regular service.¹⁴⁴ This still failed to mollify No. 70 Group, however, which reiterated its desire for trainees to do their own hooking up and stated that it "...was not satisfied that current procedures were unimprovable". The DU was instructed to devise a system to allow trainee hooking-up, and for particulars of the new connector to be forwarded to No. 70 Group for examination and approval before the device was used.¹⁴⁵

The CLE's response to this reflects growing exasperation. It was stressed that the first design of the new connector had already been modified once to enhance safety at the CLE's instigation, and that a host of non-CLE departments and personnel had been involved in the design and testing. Ringway also pointed out that the CLE's Chief Technical Officer, who would also be responsible for carrying them out, had drawn up an extensive programme of full-scale dummy tests. Copies of all test reports and photographs were to follow.¹⁴⁶ A further report detailing modifications and successful live testing of the secure panel in what were by then the AFE's Whitleys, which allowed them to return to carrying ten rather than eight trainees, followed on 20 September 1941.¹⁴⁷

No. 70 Group eventually got its way regarding making trainees responsible for hooking-up their own parachutes, but not until more suitable parachuting aircraft became available. On 13 October 1941 the AFE issued a memo misleadingly entitled "Flying Accident at Ringway 20 June 1941". This actually concerned the need to modify any future hooking-up procedures for parachuting from Vickers Wellington aircraft, and pointed out that it was not possible for trainees in Wellingtons to connect parachutes to strops themselves because centre of gravity problems obliged passengers to occupy different positions for take-off and jumping.¹⁴⁸ Tests with the Wellington were successfully completed by 5 November 1941, and an official operating procedure was produced at the same time.¹⁴⁹ Nonetheless, No. 70 Group continued doggedly to pursue the matter, and was still seeking confirmation of both the modified procedure and the new connector at the beginning of November 1941.¹⁵⁰ With regard to the latter, No. 70 Group's scepticism appears to have been justified. The AFE reported on 5 November 1941 that the situation regarding the new connector was "deplorable", because the entire second batch received had failed under testing, and all such connectors delivered to date were being returned to the manufacturer for investigation. It also reported that no satisfactory system for making trainees responsible for their own hooking-up had yet been devised.¹⁵¹

It should be noted that the root problem here was the unsuitability of the aircraft involved, rather than with the parachutes or personnel. The problem with the Whitley remained its extremely cramped and dark fuselage, which inhibited movement by passengers, and especially those wearing bulky parachutes. This makes the CLE's opposition to allowing trainees to hook-up their own parachutes understandable, and indeed prudent. The dilemma was eventually overcome with the introduction of the more suitable aircraft, such as the Armstrong-Whitworth Albemarle Mark V and the US-built Douglas C47.¹⁵² The fuselages of these aircraft were roomy enough for parachutists to attach their own parachute strops to rails or cables running along its entire length, and that of the C47 was large enough for passengers to stand upright.¹⁵³ This meant that instructors merely had to check that the clips were properly secured, and removed the need for strops to be permanently attached to secure panels in the aircraft. Instead, they could remain attached to the parachute before issue, with the clip being temporarily secured within easy reach on the shoulder of the parachute harness.

Aircraft suitability aside, events following the death of Lieutenant Twardawa clearly show that by July 1941 Ringway had lost the freedom from supervision it had enjoyed a year previously. Neither was this loss restricted solely to safety or practical matters. On 16 September 1941 the PTS compiled detailed figures for parachute training at Ringway from its inception to date, which were forwarded to HQ CLE and RAF Army Co-operation Command the next day.¹⁵⁴ From 29 August 1941 the channel of communications to and from Ringway had been standardised. At the CLE's suggestion, everything was to pass through No. 70 Group, then RAF Army Co-operation Command, and thence wherever.¹⁵⁵ The PTS's figures did not get past the first stage, despite the fact they were intended for higher authority. No. 70 Group acknowledged receipt of the paper on 18 September 1941, but criticised its presentation and provided an approved format for future use.¹⁵⁶ The PTS was obliged to resubmit the information in the new format on 24 September 1941.¹⁵⁷

Such bureaucratic nit-picking was not totally unprecedented at Ringway. In September 1940 Churchill had returned a copy of a conference agenda to the Air Ministry with a scrawled marginal complaint about lack of clarity and a demand for the culprit's name,¹⁵⁸ to which the Air Ministry apologised promptly and profusely, and named Group-Captain Goddard, then Deputy Director of Plans.¹⁵⁹ This, however, was rather different than the sustained and successful campaign waged by No. 70 Group to bring Ringway into the RAF procedural line. In some ways this was both necessary and beneficial, for as the airborne project expanded it inevitably overlapped with other RAF activities. In June 1941, for example, Ringway was obliged to liaise with Fighter Command regarding night

parachuting, which threatened to interfere with night-fighter operations by No. 9 Group.¹⁶⁰ Nonetheless, whilst the Air Ministry may have lost the battle to prevent the formation of a parachute force, it won the secondary struggle to establish firm RAF control over virtually all aspects of the airborne infrastructure. This was equally crucial, for it allowed the Air Ministry to retain a useful advantage for deployment in future struggles over the allocation of resources.

VII. Slow Marching: Glider Developments, April 1941 – January 1942

The glider portion of the British airborne force did not reach fruition until after the establishment of an operational parachute force. However, glider developments still merit examination, and not merely to properly round out the airborne story. As we have seen, a considerable amount of effort and resources were put into glider development, in parallel with the establishment of the parachute force. More importantly, glider delivery of troops and heavy equipment became a crucial factor in the large-scale airborne operations mounted by British Airborne Forces from 1943 onward.

By April 1941, the original Glider Training Squadron had been renamed No. 1 Glider Training School (GTS), although still located for the moment at the recently re-christened RAF Thame¹⁶¹. Despite the dedicated location and new name, No. 1 GTS remained severely retarded by the lack of gliders. Unlike the parallel shortage of parachuting aircraft, this was largely unavoidable, for the necessary machines simply did not exist, and could not be produced from thin air. Designs were commissioned comparatively swiftly, but there was an inevitable lag between formulation and delivery. The delay was exacerbated by the need to liaise with other departments. The MAP contacted Director of Military Co-operation Goddard following distribution of his November 1940 paper on the provision of an airborne force,¹⁶² in order to clarify the possible ramifications of glider production upon the MAP's efforts.¹⁶³ This prompted further discussion,¹⁶⁴ culminating in an Air Ministry decision to order sufficient gliders for the War Office's two projected "Invasion Corps", on 19 February 1941.¹⁶⁵ The order was placed on 3 March 1941,¹⁶⁶ with the rider that Goddard and the GTS should "...not count on any production in quantity...before late Spring 1942".¹⁶⁷

The matter was more complex than merely ordering sufficient machines, however, not least because of emerging doubts over the viability of designs. The first purpose-designed British military glider was formulated to meet Air Ministry Spec. 10/40, later christened the Hotspur. This machine first flew in November 1940,¹⁶⁸ and was test flown by CLE

staff on 21 January 1941.¹⁶⁹ The first example was delivered to the CLE on 6 February 1941,¹⁷⁰ and the type was demonstrated before Churchill at Ringway in April 1941.¹⁷¹ However, the design had been produced in haste, based on the German DFS 240 used at Eben Emael, with the result that it was poorly configured for British requirements when the latter were properly formulated. The Hotspur's carrying capacity – one pilot and seven passengers – was too small, and the sailplane-based design did not allow short, steep landing runs because of the high landing and stalling speed this conferred.¹⁷²

A pre-production meeting to discuss the Hotspur was held at the MAP on 6 March 1941,¹⁷³ and by 17 March 1941 it was advocated that procurement of the type be restricted to four hundred, for training, rather than operational, purposes.¹⁷⁴ A series of inspections and tests were conducted on pre-production Hotspurs through March and into April 1941, to determine the optimum tow-cable length.¹⁷⁵ These tests led to reductions in wing span, changes to the cockpit canopy, and to the passenger exit.¹⁷⁶ Despite this, production machines were still far from satisfactory, and following further tests in September 1941, the AFE gave its considered opinion that the Hotspur was unsuitable for operations, and did not therefore justify large-scale production.¹⁷⁷ This was relayed to RAF Army Co-operation Command,¹⁷⁸ which nonetheless ordered the continuation of trials,¹⁷⁹ although these created more problems than they resolved.¹⁸⁰ Despite this, proposals to use the Hotspur operationally continued, in part as a filler until production of a larger machine came on-stream.¹⁸¹ In the event, Hotspur was never used operationally, but served as a basic glider trainer until 1945. Over a thousand were produced.¹⁸²

The Hotspur story clearly illustrates the pitfalls inherent in formulating and producing equipment in haste without fully ascertaining its purpose. In fact, the Air Ministry's 3 March 1941 order for eight hundred gliders actually specified the twenty-five-seat glider designed to meet Spec. 26/40, later christened the Horsa.¹⁸³ The decision was endorsed by the War Office on 17 March 1941.¹⁸⁴ However, this machine only existed on paper at that time, which incidentally provides a further example of the War Office demanding equipment without fully appreciating the difficulties involved. CLE staff either discussed or examined a mock-up Horsa with civilian manufacturers in January 1941,¹⁸⁵ and the Air Ministry was informed that the specification had been fulfilled at the end of that month, with detailed drawings scheduled for delivery by the end of April 1941.¹⁸⁶ Churchill was provided with details of the Horsa in May 1941,¹⁸⁷ and it first flew at Heathrow on 3 September 1941.¹⁸⁸

Even then, it was still not merely a matter of placing the Horsa in mass production. There were the requisite production capacity and materials to find which, as the Joint Chiefs of Staff pointed out at the end of March 1941, might affect production of other wooden aircraft including the Avro Anson and Miles Magister trainers, and the Armstrong Whitworth Albemarle and De Havilland Mosquito bombers.¹⁸⁹ There was also the matter of cost. In April 1941 the Imperial and Air staffs were obliged to co-operate to fend off complaints from the Treasury over the cost of projected glider production, which was estimated by the Treasury in excess of eight million pounds.¹⁹⁰ This figure may have included the giant tank-carrying glider produced to meet Air Ministry Spec. 27/40, later christened the Hamilcar. A mock up of this machine was inspected by the CLE on 28 May 1941,¹⁹¹ and it made its maiden flight at the end of March 1942.¹⁹²

The Treasury's concerns were doubtless exacerbated by the fact that acquiring the Horsa meant effectively writing-off the resources put into the Hotspur, and because it was not guaranteed that the Horsa would prove any more suitable than the Hotspur. Theoretical calculations in April 1941 suggested that towing the larger machine might be problematic,¹⁹³ and the Director of Military Co-operation cautioned against ordering large numbers of Horsas because too little was known about the machine in October 1941,¹⁹⁴ six weeks after its first flight. These reservations supported the compromise suggested in March 1941 that the Hotspur be confined to training pending investigation of the Horsa,¹⁹⁵ which were reiterated at the end of October 1941.¹⁹⁶ This meant that the resources put into the Hotspur were not totally wasted, and allowed the operational glider force to be standardised on the Horsa and Hamilcar when they entered full-scale production.¹⁹⁷

The second major obstacle facing the No. 1 GTS was obtaining sufficient pilots to fly the projected glider force. The glider pilot issue had been an Air Ministry – War Office football since the proposal to use glider was first raised in August 1940.¹⁹⁸ The Air Ministry first insisted that the Army provide pilots, before reverting to the view on 10 December 1940 that only fully trained bomber pilots were equal to the task.¹⁹⁹ The first cohort of twelve pilots were soldiers, all of whom soloed on the GTS's sport gliders by 5 April 1941,²⁰⁰ along with sixteen volunteer RAF pilots.²⁰¹ This was complicated by the fact that the Army candidates had received insufficient basic powered flying training during their initial attachment to Army Co-operation Squadrons for that purpose up until February 1941. Nonetheless, it was five of the newly qualified Army volunteers who flew the gliders at the Ringway demonstration for Churchill at the end of that month.²⁰²

The Air Ministry changed its position on the source of glider pilots for the final time in August 1941. This was presumably because the Army was looking to the RAF to provide eight hundred pilots for two brigade-sized glider forces, one for Home deployment and one for use in India or the Middle East.²⁰³ An internal Air Ministry conference held on 22 August 1941 announced that it would be impossible to provide this number of pilots without "immobilising" bombers by stripping their crews for the purpose. It was therefore recommended that glider pilots be Army officers or NCOs seconded in Army uniform for training by the RAF, and that they also be fully trained for ground combat.²⁰⁴ This idea, subsequently encapsulated in the "total soldier" concept, was accepted by the War Office, which also agreed that candidates should conform to the same medical standards as RAF flightcrew.²⁰⁵ The upshot of this was the formation of the Army Air Corps on 21 December 1941, and the establishment of the Glider Pilot Regiment within that Corps in February 1942. By August 1942 the Regiment had grown to two battalions, and was commanded by Lieutenant-Colonel George Chatterton following the death of John Rock in a gliding accident in October 1942.²⁰⁶ These later developments finally placed the glider pilot issue firmly in the Army's court, leaving the RAF responsible solely for their flight training in the same way it provided parachute training for the parachute battalions.

Back at RAF Thame, No. 1 GTS and the DU were fully occupied in the interim, with both glider development and working with the troops who would ultimately be incorporated into the Airlanding Brigades of the British 1st and 6th Airborne Divisions. The first joint glider exercise was held at Thame on 20 February 1941,²⁰⁷ with troops from the Oxfordshire and Buckinghamshire Light Infantry, and another was held on 12 March.²⁰⁸ This began a partnership that climaxed just after midnight on 6 June 1944, at Benouville in Normandy.²⁰⁹ Gliders from Thame also participated in a joint demonstration with the PTS before the King at Windsor on 25 May 1941. As with the PTS, growing glider involvement in demonstrations and exercises obliged the formation of a dedicated unit under the CLE umbrella. Thus the Glider Exercise Flight, later Unit (GXU) was set up at Ringway on 9 July 1941, to be equipped with ten single-engine tugs and ten Hotspurs, as both types became available.²¹⁰ The GXU carried out the first glider experience flights for green troops from the Royal Welch Fusiliers on 11 October 1941,²¹¹ following the War Office's decision to transform 31 Independent Brigade Group into an Airlanding Brigade Group on 10 October.²¹² Twenty-one troops of the Ox & Bucks were lifted to participate in exercise "Cotton" on 26 October, and were inspected by GOC Western Command after landing. A further demonstration was held for the recently appointed "Commander Para-Troops and Airborne Troops", Acting Major-General F. A. M. Browning, on 12 November 1941.²¹³

Glider development work was also carried out at Thame, or elsewhere by personnel from No. 1 GTS and the DU, in parallel with flying and tactical training. Wing-Commander Norman and Flying-Officer Kronfeld attended a conference at the MAP to discuss the Hotspur on 6 March 1941, for example. A winch to allow tug aircraft to reel in glider tow-lines after release was tested rather unsuccessfully at the end of that month, and officers from the glider side of the DU inspected a mock-up of the tank-carrying Hamilcar glider on 28 May 1941.²¹⁴ Representatives from the tow-rope manufacturer R. Malcolm Ltd. visited Thame on 21 March 1941, and tests were held to ascertain the type and length of tow-line required for the Hotspur on 10 April.²¹⁵ GXU gliders also participated in a series of tests to assess the German glider threat at the Air Fighting Development Unit (AFDU) at RAF Duxford in Cambridgeshire. Carried out between mid-November and December 1941, the tests were intended to allow the formulation of counter-measures.²¹⁶ The GXU also carried out stowage and stability trials with the Hotspur, following a landing fatality and injuries caused by unsecured weapons and equipment, on 19 December 1941.²¹⁷

Thus, by the end of 1941, the PTS was finally in a position to embark upon its original task of training a large scale parachute force, and the GTS was similarly poised, awaiting only the arrival of sufficient suitable gliders. It now remains to examine how the War Office formulated a role, and provided the men, for the establishment of operational parachute and airlanding brigades.

Notes

¹ For details see Otway, *op cit.*, pp. 70-73; and Wiggan, *op cit.*

² PRO CAB 120/262, letter from PM to Ismay, dated 28/04/1941

³ PRO AIR 2/ 7470, doc. 23B, paper from AM DMC to PM via Ismay "Note on the Development of Airborne Forces", dated 29/04/1941; and doc. 23C, attached graphs and charts for projected glider production, dated 11/03/1941

⁴ the fifteen-seat glider was later named "Hengist", and consisted of two Hotspur fuselages joined with an additional centre section. It was produced as an insurance policy against the unsuitability of the larger twenty-five seat Horsa, but the success of the latter led to the Hengist being abandoned. See Otway, pp. 23-24, 391

⁵ see for example PRO AIR 32/4, doc. 3A, draft CoS paper from WO to CLE, dated 17/05/1941

⁶ PRO CAB 120/262, letter "Parachute Troops and Gliders", from Air Marshal Hollis CoS to PM, dated 31/05/1941

⁷ *ibid.*, letter from PM to Ismay, dated 27/05/1941

⁸ PRO AIR 2/4586, doc. 57A, cover note from RAF ACC to AM, dated 04/05/1941; and PRO AIR 39/4, doc. 13A, letter from AM DMC to RAF ACC, dated 07/03/1941

⁹ *ibid.*, doc. 57B, letter from RAF ACC to AM, dated 28/04/1941

-
- ¹⁰ PRO AIR 32/3, doc. 1A, letter from DMC Goddard AM to OC ACC, dated 07/03/1941
- ¹¹ PRO AIR 29/512, CLE ORB, entry for 01/01/1941
- ¹² PRO AIR 39/4, doc. 15A, letter from OC 70 Group to HQ ACC, dated 08/03/1941
- ¹³ *ibid.*, doc. 21A, letter from OC 70 Group to HQ ACC, dated 14/03/1941
- ¹⁴ see for example PRO AIR 32/3, doc. 2B, report "Note on Unofficial Visit by AOC and Squadron-Leader MacPherson to Hatfield to Inspect 'The Hertfordshire' ", dated 05/04/1940; for details of the Hertfordshire, see entry for De Havilland Flamingo in Thetford (RAF Aircraft Since 1918), p. 584
- ¹⁵ *ibid.*, doc. 2A, letter from OC 70 Group to ACC & CLE, dated 09/04/1941
- ¹⁶ PRO AIR 39/4, doc. 69A, minute "Re: Lack of Transport Aircraft", from Air 1 AM to various AM internal, dated 02/06/1941
- ¹⁷ PRO AIR 32/3, doc. 14B, "70 Group Notes from Air Ministry Conference on 22 August 1941", dated 24/08/1941
- ¹⁸ *ibid.*, doc. 14A, covering letter from OC 70 Group to CLE, dated 29/08/1941; and doc. 14C, "Minutes of Meeting at Air Ministry on August 22 1941 to Discuss Provision and Training of Flying Personnel for Airborne Forces", dated 24/08/1941
- ¹⁹ PRO AIR 2/7239, doc. 4A, "Development of Para Troops [sic] – Air Requirements: Conclusions of Conference Held at the Air Ministry June 10, 1940", dated 10/06/1940
- ²⁰ operational records show that Ringway was providing aircraft for SOE by the end of August 1940, and that SOE personnel were being trained at Ringway from at least the beginning of September 1940; see PRO AIR 29/512, CLE ORB, entries for 23/08/1940 and 01/09/1940. By January 1942 SOE was running its own small-scale parachute training operation, utilising Ringway's resources. One such SOE establishment was located near Ringway in a requisitioned merchant's house at Altrincham, according to M. R. D. Foot, who did his parachuting course there. Professor Foot is of the opinion that the drain caused by SOE on Ringway's resources was minimal, an opinion with which the present author concurs. I am indebted to Professor Foot for his opinion, and for providing details of the SOE installation at Altrincham, via a private communication dated 30/11/1999
- ²¹ PRO AIR 29/512, PTS ORB, entry for 28/10/1940
- ²² *ibid.*, PTS ORB, entry for 03/03/1941
- ²³ *ibid.*, CLE ORB, entries for 13/02/1941 & 03/03/1941
- ²⁴ PRO AIR 39/7, doc. 37A, paper "Pilot and Aircraft Requirements for Expanded Output of PTS", from CLE to 70 Group, dated 12/06/1941
- ²⁵ *ibid.*, doc. 66A, letter from CLE to 70 Group, dated 15/07/1941
- ²⁶ *ibid.*, doc. 37A, paper "Pilot and Aircraft Requirements for Expanded Output of PTS", from CLE to 70 Group, dated 12/06/1941
- ²⁷ PRO AIR 29/512, CLE ORB, entries for 16/11/1940 & 07/12/1940
- ²⁸ see for example *ibid.*, CLE ORB, entries for 10/05/1941 (test of modified container), and 04/07/1941 (test of experimental plain and camouflaged 32-foot canopies)
- ²⁹ the Avro Manchester was the twin-engine foundation for the Avro Lancaster. For details of the Halifax and Stirling, see Thetford, *op cit.*, pp. 296-303, 459-462
- ³⁰ PRO AIR 32/3, doc. 1A, letter from DMC Goddard AM to OC ACC, dated 07/03/1941
- ³¹ Norman's misgivings about the suitability of the Stirling proved well founded. According to Arnhem veteran James Sims, 1st Airborne Division used the Stirling for parachute training c. April 1944: "It proved a

terrifying aircraft to jump from...the hole in the floor was an enormous looking rectangle about six feet by four feet. When you stood on the lip awaiting the green light signal to jump you could see a large area of the ground below and a huge U-shaped bar, which was lowered for the strops of the parachutes to go under so they didn't foul the tailplane...[when a man jumped]...his helmet appeared to shave the lowered U-bar". Sims claims that at least one of his colleagues broke an arm on this bar, that the fierce slipstream from the aircraft's four engines resembled a rabbit punch on exit, and that use of the Stirling was discontinued following an extremely high rate of refusals from even seasoned paratroopers; see Sims, *op cit.*, pp. 16-19

³² in the event, the Halifax did see war service with airborne forces, being used extensively as a glider-tug. It first carried out this role for the first British glider combat mission, the ill-fated Operation Freshman, in November 1942. It was also the only tug capable of towing the giant Hamilcar tank-carrying glider, and thus participated in this capacity in all three major British airborne landings in 1944-1945. The Halifax was also used extensively to deliver SOE agents and supplies into occupied Europe, and served in a modified form as a parachute transport after 1945; see Thetford, pp. 299, 302; and Otway, Appendix "B", p. 399

³³ PRO AIR 2/4586, doc. 57B, Appendix "A", "Memo on Visits by Wing-Commander Norman to Messrs. A. V. Roe Ltd., Handley Page and Shorts to Examine Possibility of Adopting Manchester, Halifax or Stirling for Parachute Dropping", n.d., attached to document dated 28/04/1941; the individual reports on the specific aircraft include the inspection dates cited in the text

³⁴ PRO AIR 2/7338, doc. 01C, conference conclusions "Present Situation in Respect of the Development of Parachuting Training", dated 12/08/1940

³⁵ interestingly, there is no mention of this inspection in the CLE's operational records

³⁶ PRO AIR 32/3, doc. 2B, report "Note on Unofficial Visit by AOC and Squadron-Leader MacPherson to Hatfield to Inspect 'The Hertfordshire' ", dated 05/04/1940; for details of the Hertfordshire, see entry for De Havilland Flamingo in Thetford (RAF Aircraft Since 1918), p. 584

³⁷ PRO AIR 29/512, CLE ORB, entry for 01/05/1941; and PRO AIR 39/7, report "Employment of Heavy Bombers for Parachute Dropping", from HQ 70 Group to ACC, dated 18/05/1941

³⁸ see for example Terraine (Right of the Line), *op cit.*, pp. 259-269

³⁹ *ibid.*, p. 269

⁴⁰ *ibid.*, p. 459

⁴¹ see for example Gilbert (Churchill War Papers Volume II), pp. 1022-1023, 1056, 1304-1305,

⁴² quoted from the Colville Papers, diary entry for 27 June 1940; cited in Gilbert (The Churchill War Papers Vol. II), p. 426

⁴³ PRO AIR 39/7, doc. memo from ACC to No. 70 Group, "Aircraft Establishment – PTS", dated 12/06/1941; see also doc. 29A, dated 18/12/1940; and doc. 30A, memo from ACC to No. 70 Group & CLE, "Modifications of Whitley V's for Parachute Dropping", dated 12/06/1941

⁴⁴ *ibid.*, doc. 37A, paper from CLE "Pilot and Aircraft Requirements for Expanded Output of PTS", dated 12/06/1940

⁴⁵ *ibid.*, doc. 45A, letter from CLE to No. 70 Group "Allotment of Aircraft Whitley III No. K8991 Allotted for Synthetic Training", dated 26/06/1941. Harvey refers to the aircraft previously belonging to No. 41 Group, but subsequent documentation suggests that it may have come from No. 43 Group, although the latter unit may have been the parent unit for the MU that re-issued the aircraft to Ringway

⁴⁶ *ibid.*, doc. 48A, letter from No. 70 Group to ACC, dated 29/06/1941

⁴⁷ *ibid.*, doc. 55B(i), note from ACC to No. 43 Group, dated 09/07/1941

⁴⁸ *ibid.*, doc. 59B, memo from 75 MU to No. 43 Group, dated 10/07/1941

⁴⁹ *ibid.*, doc. 55B(ii), note from No. 43 Group to ACC, dated 10/07/1941

⁵⁰ *ibid.*, doc. 55A, letter from ACC to 70 Group, dated 10/07/1941

-
- ⁵¹ *ibid.*, doc. 65A, Postagram from ACC to 70 Group, dated 17/07/1941
- ⁵² *ibid.*, doc. 66A, letter from Harvey CLE to Cole-Hamilton 70 Group, dated 15/07/1941
- ⁵³ *ibid.*, doc. 68B, covering letter from RAF Kemble to CLE, dated 17/07/1941; and attached doc. 68C, "Maintenance History of Whitley Mark III K8998", n.d., c. 17/07/1941
- ⁵⁴ *ibid.*, doc. 68A, memo "Additional Aircraft for PTS" from CLE to 70 Group, dated 18/07/1941
- ⁵⁵ *ibid.*, doc. 67A, note from 70 Group to ACC, dated 19/07/1941
- ⁵⁶ *ibid.*, doc. 69A, note from 70 Group to ACC, dated 21/07/1941
- ⁵⁷ *ibid.*, doc. 18A, letter "Training of Parachutists", from ACC to 70 Group, dated 04/06/1941
- ⁵⁸ *ibid.*, doc. 19A, letter from 70 Group to CLE, dated 05/06/1941
- ⁵⁹ *ibid.*, doc. 20A, paper "Brief Aide Memoire for AMT", from CLE, dated 04/06/1941
- ⁶⁰ *ibid.*, doc. 23A, covering letter from 70 Group to CLE, dated 07/06/1941; and attached doc. 22A, questionnaire "Training of Parachute Troops at CLE", n.d., c.07/06/1941
- ⁶¹ Thetford, pp. 28-29
- ⁶² PRO AIR 39/7, doc. 37A, paper "Pilot and Aircraft Requirements for Expanded Output of PTS" from CLE to 70 Group, dated 12/06/1941
- ⁶³ *ibid.*, doc. 38A, paper "Training Capacity of PTS", from CLE to 70 Group, dated 23/06/1941
- ⁶⁴ *ibid.*, doc. 49A, letter from CLE to 70 Group, dated 27/06/1941
- ⁶⁵ the negotiations between the Air Ministry and War Office are covered in detail above
- ⁶⁶ PRO AIR 2/7574, doc. 4, letter from Air Chief Marshal Freeman AM to Brigadier Nye WO, dated 02/07/1941; and doc. 5, letter from Nye WO to Freeman AM, dated 04/07/1941
- ⁶⁷ PRO AIR 39/4, doc. 102B, paper "British Airborne Force Policy", from AM to various Departments, dated 08/08/1941
- ⁶⁸ *ibid.*, doc. 102B, paper "British Airborne Force Policy", from AM to various Departments, dated 08/08/1941
- ⁶⁹ the reference to "Transport Command" in this document is curious, for that organisation was not officially established until 25 March 1943; see Humphrey Wynn, *Forged In War*, p. 1
- ⁷⁰ PRO AIR 2/7574, doc. 20A, telegram from AM to 41 Group, dated 08/10/1941; doc. 21A, telegram from 41 Group to AM, dated 12/10/1941; and PRO AIR 39/7, doc. 158A, Postagram from ACC to 70 Group, dated 11/10/1941
- ⁷¹ Shobden had been considered for the GTS's original move from Ringway on New Years Day 1941, but was rejected in favour of Haddenham because it was unfinished; the fact that it was still unfinished eight months later suggests that it was not considered a particularly high priority; see PRO AIR 2/7338, doc. 55B, "Minutes of Air Ministry Meeting", dated 11/12/1940; PRO AIR 2/4586, doc. 46A, letter from DDOPs AM to OP1, dated 20/12/1940; and Wright, *op cit.*, pp. 27-28
- ⁷² PRO AIR 2/7574, doc. 3C, conference minutes "Minutes of Air Ministry Conference to Discuss the Provision of Flying Personnel for Airborne Forces", dated 22/08/1941
- ⁷³ *ibid.*, doc. 4A, letter from Director Bombing Operations to ACC, dated 30/08/1941
- ⁷⁴ *ibid.*, doc. 1A(2), letter from SD4 WO to DMC AM, dated 27/08/1941; AIR 39/7 doc. 88B Appendix "A", letter "Formation of Parachute Brigade", from SD4 WO to DMC AM, n.d., c.27/08/1941; and doc. 88C, chart headed "Organisation of Parachute Battalion", n.d., c.27/08/1941

⁷⁵ copies of the War Office communications were attached to the Air Ministry letter. The latter accepted the fact that an additional 2,500 paratroops were to be trained, asking only for confirmation as to whether the parachute training course could be fitted into the Army's three-month window, and that that additional personnel and equipment be provided to the CLE on the minimum scale; see PRO AIR 39/7, doc. 88A, covering letter from ACC to 70 Group, dated 31/08/1941

⁷⁶ the CLE's task was more clearly defined at the same time as being "...to investigate problems of technical development, to establish the principles of glider and parachute training and to form the first units carrying out this training"; see Otway, p. 31

⁷⁷ *ibid.*, doc. 83A, letter "Increased Output of PTS", dated 11/08/1941

⁷⁸ PRO AIR 39/4, doc. 102A, letter from ACC to 70 Group, dated 07/08/1941

⁷⁹ for the conference agenda, see PRO AIR 39/7, doc. 106B, n.d., c. 05/09/1941

⁸⁰ *ibid.*, doc. 96A, letter from 70 Group to CLE [sic], dated 06/09/1941

⁸¹ for a full list of attendees, see *ibid.*, doc. 107B

⁸² Otway, p. 34. According another secondary source, Gale was offered the command on 15 September whilst a Lt.-Col. commanding a battalion of the Leicester Regiment, but the minutes of the 9 September conference clearly list him as "Brigadier i/c 1 Para Brigade"; see Dover, *op cit.*, pp. 26-27; and PRO AIR 39/7, doc. 10B

⁸³ PRO AIR 39/7, doc. 107A, covering letter from ACC to various, dated 10/09/1941; and doc. 107C, "Minutes of Meeting at Air Ministry on September 9 1941", dated 09/09/1941

⁸⁴ PRO AIR 2/7574, doc. 20A, telegram from AM to 41 Group, dated 08/10/1941

⁸⁵ PRO AIR 39/7, doc. 158A, Postagram from ACC to 70 Group, dated 11/10/1941

⁸⁶ PRO AIR 2/7574, doc. 21A, telegram from 41 Group to AM, dated 12/10/1941

⁸⁷ PRO AIR 39/7, doc. 154A, memo "Modifications to Whitley Aircraft for Parachute Dropping" from AFE to No. 70 Group, dated 11/10/1941

⁸⁸ *ibid.*, doc. 160A, letter "Modifications to Whitleys for Parachute Dropping", from 70 Group to AFE, dated 14/10/1941; and doc. 160B, suggested draft of letter from CLE [sic] to ACC, n.d., c. 14/10/1941

⁸⁹ *ibid.*, doc. 161A, Postagram "Training of Parachute Troops", from 70 Group to ACC, dated 15/10/1941

⁹⁰ *ibid.*, doc. 190A, letter from ACC to 70 Group, dated 18/10/1941

⁹¹ *ibid.*, doc. 197A, signal from AFE to ACC, dated 16/11/1941

⁹² *ibid.*, doc. 130A, letter "Parachutes and Parachute Equipment", from CLE [sic] to 70 Group, dated 21/09/1941

⁹³ *ibid.*, doc. 131A, letter "Provision of Training Statichutes", from 70 Group to ACC, dated 23/09/1941. The letter suggested that acquisition be delayed if possible to accommodate the outcome of trials at Ringway with the Russell Lobe parachute, which had been used by stunt jumpers in the 1930s. Harry Ward claimed that the Russell Lobe was superior to the Irvin because it oscillated far less, thereby reducing the chance of injury on landing. He also claims to have demonstrated the Russell Lobe to Strange at Ringway, but as Strange left the CLE in May 1941 this was either an earlier test or Ward confused his chronology; see Ward, *op. cit.*, (Yorkshire Birdman), p. 152. The operational records make no record of any such tests in September 1941 or previously, but one document refers to using a Russell Lobe parachute during tests to assess the suitability of the Vickers Wellington for parachuting in November 1941; see *ibid.*, doc. 188A, letter "Suitability of Wellington Aircraft for Parachute Dropping", from AFE to 70 Group & PTS, dated 05/11/1941

⁹⁴ *ibid.*, doc. 138A, letter "Provision of Training Statichutes CLE [sic] Ringway", from ACC to AM, dated 27/09/1941

-
- ⁹⁵ *ibid.*, doc. 148A, letter "Provision of Training Statichutes", from ACC to 70 Group, dated 08/10/1941
- ⁹⁶ *ibid.*, doc. 135A, letter "Protective Headgear", from CLE [sic] to ACC, dated 23/09/1941. The date of this request would suggest that the helmets concerned were the final pattern training helmet, given that photographic evidence exists showing the new battalions of 1st Parachute Brigade wearing them whilst training. Nicknamed the "rubber bungee", these were canvas with an integral sorbo rubber padding ring set at forehead level, and remained in service with RAF Parachute Jump Instructors until at least the late 1950s. Parachute trainees at Ringway originally wore RAF pattern leather flying helmets, which were temporarily replaced by a crude sorbo rubber model with a neck guard. The bungee helmet was subsequently superseded for training by the rimless airborne pattern steel helmet; see Davis, pp. 222-224; for photographs of the various models see James G. Shortt, *Uniforms Illustrated No. 10: The Paras*, plates 4, 6 & 15, on pp. 6, 7 & 12
- ⁹⁷ Ward, *op cit.*, p. 147
- ⁹⁸ PRO AIR 39/7, doc. 144A, memo "Increasing Output of Parachute Troop Training", from AFE to 70 Group, dated 05/10/1941
- ⁹⁹ *ibid.*, doc. 144B, n.d., c.05/10/1941
- ¹⁰⁰ *ibid.*, doc. 150A, "Interim Report on 100 per week Paratroop Training", from AFE to 70 Group & ACC, dated 08/10/1941
- ¹⁰¹ *ibid.*, doc. 173A, signal from AFE to 70 Group, dated 21/10/1941
- ¹⁰² PRO AIR 29/512, CLE ORB, entry for 18/09/1940
- ¹⁰³ in RAF parlance, a despatcher is an aircrewman tasked to oversee a parachute jump from within the aircraft; his duties include ensuring that parachutist's static lines are correctly "hooked up", ensuring the pilots orders via the red and green jumping lights are obeyed, the safe removal of refusals from the stick, and the recovery of static lines into the aircraft after the jump.
- ¹⁰⁴ Hearn, (*Flying Rebel*) p. 122; and Ward, p. 157. There is no mention of the court-martial in the operational records, although Williams' name does not figure after the date of the raid
- ¹⁰⁵ the War Office released a "short, guarded report about the raid" on 20 February, 1941; see Margry, p. 29.
- ¹⁰⁶ PRO AIR 29/512, CLE ORB, entry for 12/05/1941
- ¹⁰⁷ Hearn (*Flying Rebel*), p. 124
- ¹⁰⁸ PRO AIR 39/7, doc. 66A, letter from Harvey to OC 70 Group, dated 15/07/1941
- ¹⁰⁹ PRO AIR 29/512, CLE ORB, entry for 04/10/1941
- ¹¹⁰ *ibid.*, CLE ORB, entry for 05/06/1941
- ¹¹¹ Benham reported to Ringway on 4 July 1940; see *ibid.*, CLE ORB, entry for 04/07/1940
- ¹¹² PRO AIR 29/512, CLE ORB, entry for 11/07/1941
- ¹¹³ Newnham, *op cit.*, pp. 10-11
- ¹¹⁴ Newnham completed his first jump from a balloon on 28 July 1941; see *ibid.*, pp. 46-48
- ¹¹⁵ *ibid.*, p. 41
- ¹¹⁶ PRO AIR 39/7, doc. 66A, letter from Harvey CLE to Cole-Hamilton, 70 Group, dated 15/07/1941
- ¹¹⁷ Ward, p. 160; Romanov arrived at Ringway on 3 July 1940, and MacMonnies was present by 8 July; see PRO AIR 29/512, CLE ORB, entry for 03/07/1940; and introduction, list of CLS staff as of 08/07/1940
- ¹¹⁸ Ward, p. 159

¹¹⁹ Newnham, p. 41

¹²⁰ Ward, p. 157

¹²¹ Hearn (Flying Rebel), p. 144

¹²² *ibid.*, p. 144

¹²³ Flight-Lieutenant John Kilkenny, from the RAF's physical training branch, arrived at the PTS sometime in September 1941, although the event is not recorded in the operational records. He is usually credited with inventing the synthetic apparatus used at the PTS, which was referred to as "Kilkenny's Circus". Ward, however, claims that much of the credit for this belonged to Bruce Williams, and that Kilkenny's role in the matter was hyped by Newnham for the latter's own benefit; see Ward, pp. 161-162

¹²⁴ *ibid.*, pp. 161, 168

¹²⁵ Newnham, pp. 54-55

¹²⁶ *ibid.*, p. 54

¹²⁷ Ward, p. 159

¹²⁸ PRO AIR 39/4, doc. 65B, letter from MAP to CLE, dated 08/05/1941

¹²⁹ *ibid.*, doc. 61B, letter from DMC AM to ACC, dated 13/05/1941

¹³⁰ *ibid.*, doc. 65A, letter from CLE to MAP, dated 18/05/1941

¹³¹ *ibid.*, doc. 63A, letter from 70 Group to ACC, dated 19/05/1941

¹³² *ibid.*, doc. 86A, letter from ACC to 70 Group, dated 17/07/1941

¹³³ *ibid.*, doc. 108A, conference minutes, dated 08/08/1941; and doc. 108B, conference conclusions, dated 08/08/1941. The same file contains numerous other documents relating to this matter

¹³⁴ Otway, p. 50

¹³⁵ this was the case with all three previous fatalities at the PTS. Driver Evans and Corporal Watts were killed by parachute failure in July and August 1940 respectively. Corporal Carter was killed when the snap-hook linking the parachute strop to the strong-point in the aircraft snagged on the edge of a Whitley aperture on 19 November 1940; see PRO AIR 29/512, CLE ORB, entries for 25/07/1940, 27/08/1940 & 19/11/1940; and Newnham, p. 23. For further details of these fatalities, see Chapter Five above

¹³⁶ *ibid.*, DU ORB, entry for 27/11/1940

¹³⁷ *ibid.*, CLE ORB, entry for 19/06/1941

¹³⁸ there were three parts in the chain linking the static-line parachute to the aircraft: a secure panel attached to the aircraft, which was later replaced by a cable; a reinforced canvas strap called the strop, one end of which was attached to the secure panel with a snap-hook, and the other to the static-line attached to the parachute pack. The pack was in turn secured to the parachute canopy with nylon ties designed to break once the canopy was fully developed. Corporal Carter was killed when the snap-hook linking his parachute to the strop snagged and came undone. Lt. Twardawa was killed when the snap-hook linking the strop to the secure panel came undone, apparently from snagging on another snap-hook. The documents suggest this may have been the result of clipping ten strops to a secure panel designed for eight, and it is also possible that the safety pins designed at the DU after Corporal Carter's death were only attached to the snap-hooks linking the strop to the parachute

¹³⁹ PRO AIR 39/7, doc. 111A, letter "Flying Accident Ringway on 20 June [sic] 1941 Resulting in the Death of 2nd Lieutenant Jan Twardawa", for 70 Group to CLE, dated 18/07/1941

¹⁴⁰ *ibid.*, doc. 112A, covering letter from OC CLE to 70 Group, dated 19/07/1941; and doc. 112B, paper "Parachute Dropping" from Harvey CLE, dated 18/07/1941

-
- ¹⁴¹ *ibid.*, doc. 74A, letter "Flying Accident – Whitley K7262, at Tatton Park near Ringway on 19 June 1941 – PTS", from 70 Group to CLE, dated 24/07/1941
- ¹⁴² *ibid.*, doc. 115A, letter from CLE to 70 Group, dated 27/07/1941
- ¹⁴³ *ibid.*, doc. 117A, letter from 70 Group to CLE, dated 31/07/1941
- ¹⁴⁴ *ibid.*, doc. 119A, letter from CLE to 70 Group, dated 15/08/1941
- ¹⁴⁵ *ibid.*, doc. 122A, letter from 70 Group to CLE, dated 25/08/1941
- ¹⁴⁶ *ibid.*, doc. 124A, letter from CLE to 70 Group, dated 29/08/1941
- ¹⁴⁷ *ibid.*, doc. 128A, letter from CLE [sic] to 70 Group, dated 20/09/1941
- ¹⁴⁸ *ibid.*, doc. 163A, memo from AFE to 70 Group, dated 13/10/1941
- ¹⁴⁹ *ibid.*, doc. 188A, letter "suitability of Wellington Aircraft for Parachute Dropping", from AFE to 70 Group & PTS, dated 05/11/1941; and doc. 188B, "Pilot's Order Book: Special Orders to Apply when Parachutists Carried in Wellington Aircraft", n.d., c.05/11/1941
- ¹⁵⁰ *ibid.*, doc. 181A, letter from AFE to 70 Group, dated 01/11/1941
- ¹⁵¹ *ibid.*, doc. 187A, letter "Attachment of Static Line", from AFE to 70 Group, dated 05/11/1941
- ¹⁵² for brief details of these aircraft, see Otway, Appendix "B", pp. 398-399
- ¹⁵³ photographs of fully-equipped parachutists being carried in all these aircraft clearly illustrate their varying degrees of suitability. For the Whitley and Albemarle, see Thompson, *op cit.*, plates between pp. 116-117; for the DC3, see Otway, plate 24, between pp. 196-197
- ¹⁵⁴ PRO AIR 39/7, doc. 109A, covering letter from Newnham OC PTS to ACC, dated 17/09/1941; and doc. 109B, "Training: Parachutists", from PTS to CLE, dated 16/09/1941
- ¹⁵⁵ *ibid.*, doc. 124A, memo from CLE to 70 Group, dated 29/08/1941
- ¹⁵⁶ *ibid.*, doc. 110A, letter from 70 Group to CLE, dated 18/09/1941
- ¹⁵⁷ *ibid.*, doc. 136A, covering letter from PTS to 70 Group, dated 24/09/1941; and doc. 136B, two page breakdown of parachute training statistics from July 1940 to September 1941, n.d., c.24/09/1941
- ¹⁵⁸ PRO CAB 120/262, doc. 23, conference agenda "Provision of Air Borne Force: Conference at the Air Ministry 5 September 1940", dated 02/09/1940
- ¹⁵⁹ *ibid.*, doc. 25, letter from Air Ministry to Prime Minister, dated 11/09/1940
- ¹⁶⁰ PRO AIR 39/7, doc. 24A, paper "Night Flying from Ringway Aerodrome", from 70 Group to CLE, dated 09/06/1941; doc. 26A, covering letter from 70 Group to CLE, dated 08/06/1941; doc. 26B, letter from HQ fighter Command to "relevant authority" regarding curtailing night fighter operations over Ringway, dated 08/06/1941; doc. 27A, letter from 70 Group to Fighter Command, dated 10/06/1941; doc. 32A, letter from 9 Group to 70 Group, dated 11/06/1941; and doc. 33A, letter from CLE to 70 Group, dated 13/06/1941
- ¹⁶¹ see Chapter Five above
- ¹⁶² PRO AIR 2/7338, doc. 48B, minute "Provision of an Airborne Force", dated 16/11/1940
- ¹⁶³ *ibid.*, doc. 73A, letter from MAP to DMC AM, dated 04/01/1941
- ¹⁶⁴ *ibid.*, doc. 86A, letter from AM to MAP, dated 22/02/1941
- ¹⁶⁵ *ibid.*, doc. 89A, conference "Minutes of Air Ministry Meeting 19 February 1941", dated 25/02/1941
- ¹⁶⁶ *ibid.*, doc. 91B, signal from ACAS (T) AM to DMO AM, dated 03/03/1941

-
- ¹⁶⁷ *ibid.*, doc. 91A, signal from ACAS (T) AM to DMC AM, dated 04/03/1941
- ¹⁶⁸ Thetford, p. 621
- ¹⁶⁹ PRO AIR 29/512, CLE ORB, entry for 21/01/1941
- ¹⁷⁰ Smith (Glider Pilot Regiment), *op cit.*, p. 13. Interestingly, there is no mention of this in the CLE operational record book
- ¹⁷¹ see Chapter Five above
- ¹⁷² PRO AIR 32/3, doc. 19A, letter "Provision of Gliders", from CLE (sic) to 70 Group, dated 11/09/1941
- ¹⁷³ PRO AIR 29/512, CLE ORB, entry for 06/03/1941
- ¹⁷⁴ PRO AIR 2/7470, doc. 14A, "Draft Chiefs of Staff Paper: Policy for Airborne Forces", n.d., c.17/03/1941
- ¹⁷⁵ PRO AIR 29/512, entries for 25/03/1941, 28/03/1941, 30/03/1941 & 10/04/1941
- ¹⁷⁶ passengers in the Hotspur Mark I exited through the hinged top of the fuselage. The Mark II was modified with two side doors, in part to give it a never-used parachuting capability; see Thetford, p. 621; and Otway, p. 390
- ¹⁷⁷ PRO AIR 32/3, doc. 19A, letter "Provision of Gliders", from CLE (sic) to 70 Group, dated 11/09/1941
- ¹⁷⁸ *ibid.*, doc. 21A, letter from 70 Group to ACC, dated 15/09/1941
- ¹⁷⁹ *ibid.*, doc. 24A, letter from 70 Group to CLE (sic), dated 21/09/1941
- ¹⁸⁰ PRO AIR 29/512, CLE ORB, entry for 26/09/1941; AIR 32/3, doc. 27A, letter "Provision of Gliders", from AFE to 70 Group, dated 15/10/1941; and doc. 36A, letter "Hotspur II, Full Load Trials", from TDS to AFE, dated 02/11/1941
- ¹⁸¹ for example AIR 32/3, doc. 41A, paper "Present Proposals for Glider Borne Forces", from AFE, dated 28/10/1941; and doc. 45A, agenda and minutes "Meeting to Consider Army Requirements for Airborne Forces", dated 30/12/12941 and 01/01/1942 respectively
- ¹⁸² Thetford, p. 621
- ¹⁸³ PRO AIR 2/7338, doc. 91B, signal from ACAS (T) AM to DMO AM, dated 03/03/1941
- ¹⁸⁴ PRO AIR 2/7470, doc. 17A, letter from WO to AM, dated 17/03/1941
- ¹⁸⁵ according to the operational records, Wing-Co. Buxton from the CLE DU inspected a mock-up glider at the Airspeed works on 15 January, but another entry six days later refers to other CLE officers discussing production of a mock-up glider, also for Spec. 26/40. Possibly this was related to competing designs for the specification; see PRO AIR 29/512, CLE ORB, entries for 15/01/1941 & 21/01/1941
- ¹⁸⁶ PRO AIR 2/7338, doc. 77A, letter "25 Seater Glider to Specification S.26/40", from MAP to ACAS (T) AM, dated 30/01/1941
- ¹⁸⁷ PRO CAB 120/262, doc. 36, "Note on Horsa Glider", n.d., c.05/1941
- ¹⁸⁸ PRO AIR 29/512, CLE ORB, entry for 03/09/1941
- ¹⁸⁹ PRO AIR 7470, doc. 18B, paper "Chiefs of Staff Paper: Policy for Airborne Forces", dated 24/03/1941
- ¹⁹⁰ *ibid.*, doc. 20A, letter from VCIGS WO to VCAS AM, dated 10/04/1941
- ¹⁹¹ PRO AIR 29/512, CLE ORB, entry for 28/05/1941
- ¹⁹² Thetford, p. 622

-
- ¹⁹³ PRO AIR 2/7470, doc. 22A, letter "Towing 25 Seat Glider", from MAP to AM, dated 11/04/1941
- ¹⁹⁴ PRO AIR 32/3, doc. 28B, letter from DMC AM to ACC, dated 17/10/1941
- ¹⁹⁵ PRO AIR 2/7470, doc. 18B, paper "Chiefs of Staff Paper: Policy for Airborne Forces", dated 24/03/1941
- ¹⁹⁶ PRO AIR 32/3, doc. 41A, paper "Present Proposals for Glider Borne Force", from CLE (sic), dated 28/10/1941
- ¹⁹⁷ *ibid.*, doc. 40B, paper "Air Borne Forces – Policy", from Air Ministry, dated 02/11/1941
- ¹⁹⁸ PRO AIR 2/7338, doc. 01C, paper "Present Situation in Respect of the Development of Parachute Training", from AM, dated 12/08/1940
- ¹⁹⁹ *ibid.*, doc. 55B, "Minutes of Meeting, Air Ministry 11 December 1940", dated 11/12/1940
- ²⁰⁰ PRO AIR 29/512, CLE ORB, entry for 05/04/1941
- ²⁰¹ Smith (Glider Pilot Regiment), p. 16
- ²⁰² Smith (Glider Pilot Regiment), p. 17
- ²⁰³ see for example PRO AIR 32/3, doc. 10B, letter from AM to 70 Group, dated 25/07/1941
- ²⁰⁴ PRO AIR 2/7570, doc. 3C, "Minutes of Air Ministry Conference to Discuss the Provision of Flying Personnel for Airborne Forces", dated 22/08/1941
- ²⁰⁵ Otway, p. 36
- ²⁰⁶ *ibid.*, pp. 42, 55-56
- ²⁰⁷ PRO AIR 29/512, CLE ORB, entry for 20/02/1941
- ²⁰⁸ *ibid.*, CLE ORB, entry for 12/03/1941
- ²⁰⁹ a company of the Ox & Bucks under Major John Howard were the first Allied troops to land on D-Day, seizing the vital bridges over the Orne River and Canal in Normandy, thereby securing a link between the invasion beaches and the 6th Airborne Division holding the Eastern shoulder of the invasion area; for details see Otway, pp. 173-174, 178; see Ambrose, *op cit.*, and Shannon, *op cit.*
- ²¹⁰ PRO AIR 2/4586, doc. 58A, telegram from AM to 41 Group, dated 8-9/07/1941
- ²¹¹ PRO AIR 29/512, entry for 11/10/1941
- ²¹² PRO AIR 32/3, doc. 30A, letter from C in C HoFor to All Army Home Commands, dated 10/10/1941. 31 Brigade Group was a full strength formation made up from units recalled from India, and was carrying out mountain training in Wales; see Otway, pp. 37, 41-42
- ²¹³ PRO AIR 29/512, CLE ORB, entry for 26/10/1941. Browning was appointed on 29/10/1941; see Otway, p. 39
- ²¹⁴ *ibid.*, CLE ORB, entries for 06/03/1941, 27/03/1941 & 28/05/1941
- ²¹⁵ *ibid.*, CLE ORB, entries for 21/03/1941 & 10/04/1941
- ²¹⁶ PRO AIR 39/52, docs. 1A & 1B, letters from Deputy Director Air Tactics to ACC, both dated 15/11/1941; doc. 3A, Postagram from DDAT to AFE, dated 23/11/1941; doc. 7A, minute from Airlanding Bde. Gp., dated 28/11/1942; doc. 9A, signal approving trials, dated 01/12/1941; doc. 11A & 11B, covering letter and attached AFE questionnaire (dated 25/10/1941) from 70 Group to ACC, dated 25/12/1941; and Doc. 11C, detailed response to questionnaire from GXU to AFE, dated 02/12/1941
- ²¹⁷ *ibid.*, doc. 17A, letter from ACC to GOC Airborne Div., dated 12/01/1942 and attached letter from Principal Medical Officer, ACC (dated 08/01/1942); and doc. 21A, letter from ACC to 70 Group, dated 27/01/1942

CHAPTER EIGHT

From Maverick Raiders to a Conventional Force: The Transformation of 11 SAS Battalion Into the 1st Parachute Brigade

Over the period 1940 to early 1941, the Army created a semi-operational parachute force, in the shape of No. 11 Special Air Service Battalion. Failure to attract sufficient volunteers of the right calibre meant that in reality 11 SAS Battalion remained understrength, although the fact that the unit was configured and trained for small-scale raiding operations obviated this problem to degree. The Tragino Raid proved the viability of such operations, at least up to a point, in February 1941. As we have seen, this raiding focus was largely mandated by the Army's shortage of manpower following its ejection from mainland Europe, and the failure of the Air Ministry to supply sufficient aircraft to train for anything larger, although the War Office harboured grander airborne ambitions virtually from the outset. These were realised at the beginning of 1942, by which time the Army had transformed and expanded its band of parachute raiders into a brigade of three parachute battalions, with another battalion in the pipeline.

However, this was by no means the seamless and logical progression portrayed in the official histories and secondary accounts. This chapter will therefore concentrate upon the Army side of matters, and argue that despite its early interest in a large-scale airborne force, the Army only seriously undertook the necessary doctrinal and organisational investigations from July 1941, and *after* the decision to expand the airborne force had been taken. The expansion was thus carried out without the benefits that systematic research in the first year of its existence could have afforded, and the Army was consequently obliged to reshape its existing airborne recruiting and training procedures. This chapter will also reveal a factor that has been largely overlooked by previous historians. This is the degree to which the British transition from airborne raiders to a large-scale force for use in support of conventional operations utilised Polish input, both theoretical and practical.

1. No Longer a Parochial Concern: External Interest In the New British Airborne Force

During the course of 1941 the new British airborne force shifted from being merely a matter of discussion between a few departments and officials in Whitehall. The Tragino Raid of February 1941 had been widely reported in the press,¹ and the new arm thus became an object of public interest. In July 1941 the CLE prepared a paper for public consumption at the behest of RAF Army Co-operation Command.² Entitled "British

Parachute Troops", the stated purpose of the paper was to put the latter's capabilities in their proper context and "...not to allow imagination to run riot so they [the parachute troops] appear to be possessed of some mystical omnipotency".³ This would suggest that the powers that be were aware at this time of the maverick image cultivated by some amongst the rank and file of 11 SAS Battalion, and which was later vigorously suppressed.⁴ Despite the disclaimer, the paper nonetheless closed on a rousing note:

"They are some of our finest stormtroopers who are imbued with the one ambition of getting to grips with the enemy in whatever role... We know they will give a good account of themselves in whatever circumstances they may find themselves. Good luck to them".⁵

An official press visit to Ringway was arranged in October 1941. A Movietone News newsreel was shot, which included scenes of parachutists making mass aircraft jumps and Group-Captain Harvey was interviewed at length on the role of the AFE and airborne forces.⁶ Interest in British parachute forces was not confined to the domestic sphere. In June 1941 the Army staff at the CLE prepared a paper including details of personal kit, equipment and container load combinations for transmission to the Turkish government, following a request from the latter to the War Office.⁷ Precisely what prompted the Turkish enquiry is unclear, for the War Office paper appears to be a one off. Nonetheless, it clearly illustrates that the British airborne force had moved beyond being an internal Whitehall matter.

Arguably more important from a policy-forming perspective was the continued official military interest from British commands outside the UK. Middle Eastern Command and India had expressed interest in forming airborne forces of their own as early as the autumn of 1940,⁸ and continued to follow developments thereafter via the War Office.⁹ Despite initial optimism, the Middle Eastern effort was stymied by shortages of suitable equipment, particularly aircraft, and lapsed for a time as a result.¹⁰ However, the Indian Commander-in-Chief, General Sir Robert Cassels, was a firm supporter of the airborne idea, and had more clout. He authorised the formation of three parachute battalions for a future Indian parachute brigade on 2 December 1940, and, although the War Office advised that Indian developments be postponed until the home airborne situation was clarified at the end of January 1941,¹¹ he formed an Airborne Troop Committee on 16 April 1941. The committee was headed by the senior RAF staff officer in India, Air Commodore Claude-Wright, with a brief to investigate and fabricate solutions to problems likely to affect the establishment of a parachute brigade and training infrastructure in India. Cassels went

ahead with the establishment of an Indian parachute brigade on 15 May 1941, and the 50th Indian Parachute Brigade was officially brought into existence the following October.¹²

This shows that, up to a point, Indian airborne progress kept abreast of that in Britain. Indeed, it could be argued that the Indians were actually ahead, for the British October 1940 decision to form a parachute brigade was not settled beyond doubt until the end of August 1941.¹³ On the other hand, the Indian airborne effort promptly ran into a series of equipment problems, not the least of which was a lack of parachutes and aircraft. The Indian lead was therefore more apparent than real, although it did bear fruit in the end, with the initial Indian parachute brigade being expanded to divisional size by April 1945.¹⁴ Initial Indian progress was attributable to a combination of factors, foremost of which was remoteness from Whitehall. In addition, mutual co-operation between the Army and RAF in India was built on the considerable degree of practical experience garnered from joint Imperial policing operations in the inter-war period.¹⁵ The fact that the movement of troops and material by air was a matter of routine in India meant that much of the co-operative groundwork, which proved necessary in Britain, had already been done. Forming an Indian parachute unit was therefore merely a matter of training for a new method of descent, rather than a shift in operational thinking.

Indian developments not only provided Churchill with a useful prompt for use at home, but also with a pro-airborne political ally, in the shape of the Secretary of State for India, L. S. Amery. Amery wrote to Churchill on 6 October 1941, urging the establishment of a multi-divisional airborne force in India for strategic, rather than merely tactical, employment in the Empire. This coincided with General Cassels' order to establish an Indian airborne brigade, and Amery also cited Wavell as a supporter of the project.¹⁶ Churchill passed this to the Chiefs Of Staff for comment,¹⁷ and the latter responded with a very detailed and fairly accurate appraisal of the current airborne situation. The crux of this was that there was no real prospect of implementing Amery's proposals without a significant shift in aircraft production priorities, which would entail a significant delay in overall aircraft production. The Prime Minister passed this straight on to Amery, with the pencilled footnote "Secretary of State for India: have you any further comment?".¹⁸

Amery did indeed have some further comments, which must have been music to Churchill's ears, and indeed those of the pro-airborne lobby. He began by questioning the Chiefs of Staff's commitment to the airborne idea, and the assumption that glider production had to be governed by the availability of tug aircraft. He also recommended a new investigation into obtaining transport aircraft from the US, and suggested that gliders

could be built in India, Canada and the US in order to boost production.¹⁹ He added to this list five days later, suggesting that cheap and unsophisticated transport aircraft be built alongside bombers on the production line.²⁰ Churchill again relayed all this to the Chief of Air Staff at the Air Ministry, on 13 November 1941.²¹

Amery was rehashing ideas that had been floated a year previously, albeit in a more forthright manner, and the Air Ministry response was equally familiar. Pre-war funding parsimony was again blamed for aircraft shortages, and Amery's enthusiasm for transport aircraft was dismissed out of hand. The utility of such machines was acknowledged, but they could not "...properly be regarded as a normal means of transporting or maintaining troops in the field or of operating a transport route on a large scale".²² This verdict was of course proved wildly inaccurate by future events, for which the Air Ministry could arguably be forgiven. It is less easy to dismiss its seeming ignorance of the extent of Army-RAF co-operation in the Empire between the wars. It is therefore difficult to avoid concluding that the Air Ministry was deliberately ignoring facts that did not support current air policy. This particular piece of Air Ministry obfuscation cannot have been intended to obstruct the Home airborne effort, for 1st Parachute Brigade had commenced training at Ringway on 1 November 1941.²³ It is therefore more likely to have been a measure to try and avoid supplying additional RAF resources for an expansion of the airborne effort overseas.

Be that as it may, the question refused to go away because overseas commands continued to agitate for their own airborne forces. In the Middle East Wavell's successor as Middle Eastern commander, Sir Claude Auchinleck, vigorously reopened the matter of establishing an airborne force in the Middle East. In a telegram despatched to London on 20 January 1942, addressed to every senior official in the War Office including the Secretary of State for War, Auchinleck insisted that "...we must have an airborne force on the spot". He also claimed that the lack of such a force had been directly responsible for losing a "golden opportunity" to destroy Rommel in Libya, and recommended that an initial airborne increment of battalion size be established immediately, using local resources allied to expertise and equipment from the UK.²⁴

Auchinleck's enthusiasm for airborne matters may have dated back as far as the First World War. He participated in attempts to relieve Townshead's encircled forces at Kut in Mesopotamia, and probably saw the unsuccessful attempts to supply the garrison from the air.²⁵ More pertinently, he served in Kurdistan and India throughout the inter-war period, as Colonel of the 1st Punjabi regiment from 1929, and latterly as member of the Expert

Committee on the Defence of India, also known as the Chatfield Committee. He would therefore have been well aware of the scale and importance of air transportation in the Empire through the 1920s and 30s, which explains his accurate appreciation of the potential advantages airborne operations offered in the Middle East. Further evidence of Auchinleck's penchant for unconventional thinking is provided by the fact that he authorised the formation of David Stirling's Special Air Service raiders.²⁶

Airborne forces were eventually deployed in the Middle East. The 4th Parachute Brigade, based upon 151 Parachute Battalion transferred from India, was formed at Kabrit in the Suez Canal Zone in November 1942, supported by No. 4 Middle East [parachute] Training School, established in May 1942. Both units moved to more suitable accommodation at Ramat David in Northern Palestine in February 1943.²⁷ 1st Parachute Brigade was also deployed to North Africa from the UK in November 1942, for operations in Algeria and Tunisia.²⁸ However, they came too late to participate in the destruction of Rommel, or indeed to aid Auchinleck, who was replaced as Commander-in-Chief Middle East by Alexander in August 1942.²⁹

Amery also continued the push for the establishment of an airborne capability in India. He wrote to Churchill on 19 January 1942, the same day that Auchinleck despatched his telegram to the War Office. Amery reiterated Auchinleck's arguments, emphasised the quick-reaction capability an airborne force would provide in both the Middle and Far East, and urged the Prime Minister not to be put off by Air Ministry obstruction.³⁰ The Indian and the Middle Eastern effort were clearly being orchestrated to some degree. Auchinleck berated the Indian War Office for the lack of airborne progress by telegram at the end of March 1942,³¹ and Amery passed details of Indian progress to the Indian government on 5 April 1942, apparently in reply to Auchinleck's complaints.³² Amery's letter of 19 January 1942 to Churchill is particularly noteworthy, because of the shrewd analysis of the root of the problems being encountered by the airborne effort in the UK and, by extension, elsewhere:

“ I still believe that the only way to get the thing on an adequate scale is to insist on having it, on whatever scale you decide on, entirely separate from the Air Force. Order large quantities of powerful engines, have your transport planes and gliders built, all as a show of its own. Otherwise the Air Staff will always point out how few are the bombers or pilots that can be spared for the task.”³³

These were prophetic words indeed, and it is fascinating to speculate how the airborne effort might have turned out had Churchill placed it in the hands of Amery or a similarly

independent and capable individual at the outset, rather than relying upon the goodwill of the Whitehall bureaucracies involved.

II. Refining the Home Airborne Requirement, July to September 1941

As we have seen, the Army's view of the shape and role of its new airborne force began to shift well before Churchill's April 1941 visit to Ringway revitalised the airborne project.³⁴ The War Office decided, provisionally and unilaterally, to aim for a brigade-size parachute force on 4 October 1940,³⁵ and only officially informed the Air Ministry of its decision a month later, in early November 1940.³⁶ Additional details were furnished in January 1941,³⁷ which were amended shortly thereafter.³⁸ The upshot was an airborne concensus of sorts between the Air Ministry and War Office by April 1941, although this was only achieved after a series of joint conferences and the production of a joint airborne policy paper for the Chiefs of Staff in March 1941.³⁹ Despite the high level of interest in the airborne idea outside the UK, developments in Britain remained the crucial element in the further development of the British airborne arm. However, Home progress was by no means dynamic, at least until mid-way through 1941. The idea of raising airborne units of brigade size may have been under varying degrees of consideration since September 1940,⁴⁰ but until early July 1941 little was done to clarify their intended purpose, composition and training, or where the necessary personnel were to be drawn from. In fact, when the War Office informed the Air Ministry of its crystallising intent to expand the airborne force by a further 1,800 men on 4 July 1941, the proposal was by no means universally accepted within the Army either.⁴¹

This is clear from a 4 July 1941 memo from the Assistant Chief of the Imperial Staff (ACIGS), Lieutenant-General Haining. Haining pointed out that the Army was short of manpower, and recommended two possible courses for the expansion of the airborne force. First, that the expansion be postponed until Army reorganisations scheduled for November 1941 were completed, or second, that the expansion be restricted to raising a single new parachute battalion, with the remaining two battalions being raised later.⁴² Haining passed his proposals to Sir John Dill, Chief of the Imperial General Staff (CIGS) for consideration. Dill, however, considered the airborne force an important priority, and thus overruled both Haining's proposals in a pencilled footnote on the latter's memo on 5 July 1941. He [Dill] stated that the airborne expansion had to be pushed ahead in spite of any adverse effects upon the "hard pressed" infantry arm, and that two of the projected three new parachute battalions should be raised immediately.⁴³ Further evidence that the Army had failed to examine the practical implications of expanding the airborne force until July

1941 can be found in a detailed paper by Lieutenant-Colonel Rock, which appeared two days after Dill made his decision.⁴⁴ Rock acknowledged that the crux of the problem was to raise the extra parachute battalions "...without disorganising the rest of the Army", and made it clear that there was no easy solution to this dilemma.

Rock detailed five options for raising new parachute recruits, beginning with the existing system of drawing volunteers from across the Army. This was considered to be too slow for the rapid expansion envisaged, and was considered wasteful of trained manpower from the Army's technical corps. Second, Rock rejected restricting voluntary recruiting to infantry battalions and Infantry Training Centres (ITCs), because it would merely compound the problem by allying the sluggishness and wastefulness of the existing system to a much narrower volunteer pool. The third option was to raise a voluntary battalion cadre of officers and NCOs using one of the first two options, and to draw the rest from high quality manpower selected at the initial call-up stage. This would ensure a flow of the best recruits to parachute units and was considered an excellent method for peacetime parachute recruiting, but was still too slow for the current situation. Option four was to draw parachute recruits from a single infantry regiment and its attendant ITC, and to draft in non-jumping personnel from elsewhere. This would ease administration, and allow the inculcation of *esprit de corps* in the new unit, but again from a limited manpower pool.

Option five was the most radical. Rock suggested scrapping the voluntary principle altogether, and the conversion of whole infantry battalions *en masse*, with only the proven medically unfit being posted elsewhere. This would allow the expansion to proceed quickly, with a minimum of administration and retain the original unit's *esprit*, although Rock did acknowledge that this was a very risky option. In particular, imposing the change would have to be draconian, with no release on compassionate grounds being allowed. Rock concluded by rejecting the first two options as "inefficient compromises", and opined that the conversion of existing battalions was the only practical method of expanding the airborne force with the necessary speed, in spite of the possible dangers.

Rock therefore recommended that the second parachute battalion (in addition to 11 SAS Battalion) should be raised by either the existing voluntary system or battalion conversion, that the third parachute battalion be raised by converting an existing battalion, and that all subsequent reinforcements be volunteers selected at call-up. He closed by examining the impact of the airborne expansion upon 11 SAS Battalion, and by stressing the need for a dedicated parachute brigade headquarters to oversee administration and training. The future of 11 SAS Battalion was considered dependent upon which recruiting method was

selected for the additional parachute battalions and a drastic change in the Commando terms of service under which its personnel were serving. A combination of the CIGS's and Rock's views formed the basis for a War Office conference on 23 July 1941. The conference aimed to settle five specific points. These were the method by which the additional parachute battalions were to be raised, and to review the Commando terms of service for airborne troops. In addition, training procedures and any additional requirements were to be reviewed, a timetable for the establishment of the new battalions was to be formulated, and the question of the new unit's accommodation was also to be addressed.⁴⁵ Brigadier Nye chaired the conference, and its conclusions highlighted the flaws in the original parachute recruiting system, as well as the fact that the Army had left them virtually unaddressed for the best part of a year.

The conference discussion was summarised as a series of recommendations, for onward transmission to the CIGS for approval. Three parachute battalions and their first increment of reinforcements were to be raised and trained by 1 March 1942, utilising volunteers raised through the existing system, but minus the cash subsistence and option to Return To Unit (RTU). This was to be partly offset by the introduction of an unspecified new parachute pay allowance, which was to be widely advertised within the Army as a recruiting inducement. 11 SAS Battalion was to retain its Commando privileges, but only until the first new battalion was trained, after which they were to be withdrawn. A cadre of volunteer officers and NCOs was to be provided by the War Office's Department of Organisation, a War Establishment for parachute battalions was to be drawn up using the standard infantry battalion as a template, and the Royal Engineers were to provide an "Air Troop" for airborne service. A dedicated brigade headquarters was to be formed, initially for administrative and training purposes, and the new battalions were to be housed at Hardwick Hall in Derbyshire, although the precise capacity of that location had to be clarified. Parachute training was to be carried out at the CLE, with additional instructors drawn from 11 SAS Battalion. Officers and NCOs for the new battalions were to be trained in small batches before training for the bulk of their personnel commenced. Finally, no action was to be undertaken until the recommendations were approved by the CIGS.⁴⁶

The War Office informed the Air Ministry of its decision to raise two additional parachute battalions at the end of August 1941. The 23 July conference conclusions were quoted virtually verbatim, along with a request that the CLE be ready to commence training at the one hundred per week rate from 1 November 1941.⁴⁷ It is interesting to note that the relative lack of airborne progress reflected in the conference conclusions elicited

surprise from at least one high-ranking Army officer. Lieutenant-General Sir Ronald Adam wrote to the Commander-in-Chief, Home Forces on 18 August 1941, seeking authorisation to draw parachute recruits from Home Forces infantry units, and closed with the following comment: "I know you will realise the necessity for doing this and doing it quickly. I am horrified to find how few trained parachutists we have at present in the British Army. We ought at least to have had 5,000 by now."⁴⁸ This sense of shock suggests that high-level expectations of airborne progress within the Army paralleled those of Churchill.

Another conference was held at the War Office on 26 August 1941, to consider progress and problems arising from the conclusions of the 23 July conference. This was attended by Lieutenant-Colonel Stephenson from War Office SD4, Lieutenant-Colonel Down, commander of 11 SAS Battalion since June 1941, and the officer selected to command what was to become 1st Parachute Brigade, Brigadier Richard Gale MC. Down expressed dissatisfaction with Hardwick because of the poor weather, but acknowledged that there was currently no alternative. He also raised the matter of parachute pay, which he recommended should be paid at the same rate across the board, and suggested that the number of jumps to qualify for the extra pay be lowered from nine to three. A decision on these matters was postponed for later consideration. The meeting then went on to discuss a variety of relevant matters. These included modification of the airborne recruiting criteria for all Home Forces Commands, the need to allow the new battalions a shaking down period prior to parachute training at Ringway, and the need to increase the proportion of trained reinforcements to twenty per cent of the brigade's as yet undecided war establishment. The conference concluded with a list of recommendations. An administrative section was to be set up at Hardwick Hall by 15 September 1941, and the camp was to be ready to accept the first batch of new parachute trainees by the same date. It was also recommended that the new unit's war establishment be agreed as soon as possible, that names of putative battalion commanders be forwarded to Gale for consideration, and that volunteers for airborne service be sought amongst Royal Engineers (RE) and Royal Army Medical Corps (RAMC) personnel.⁴⁹

The upshot of all this was a circular similar to that of June 1940 to raise Commando volunteers.⁵⁰ Issued on 28 August 1941 by the Assistant Adjutant General, the circular was distributed to all Home Forces Commands, and was directed to all infantry officers, and enlisted personnel from all Field Force, Infantry, Rifle and Machine Gun Battalions in the UK. No special terms of service were offered, apart from parachute pay at a rate of four shillings per week for officers and half that for other ranks, payable on completion of

three parachute jumps. Volunteers were to be keen, intelligent and of first class character, with high standards of weapon training. All had to be right-handed shots, and soldiers with spectacles were ineligible. Captains were to be company command qualified, and specialist signal and mortar officers were especially required. An upper limit of ten other rank volunteers per unit was set in order to avoid "undue depletion".

Particular attention was paid to physical fitness, with a long list of conditions being appended to the circular. Volunteers were to be between the ages of twenty and thirty two, although the upper limit could be relaxed for officers and NCOs, but with the strict proviso that they met all other physical standards. All were to be passed A1 fit, were to weigh a maximum of one hundred and ninety-six pounds naked, to have 6/12 vision in each eye, and to have acuity equivalent to at least Army Hearing Standard Two. Volunteers were also to have a minimum of eight sound or replacement teeth including two molars, in the upper jaw, which were to be in "good relation" to those in the lower. Nominal rolls of volunteers were to be returned to AG17 by 13 September 1941.⁵¹

War Office planning for expanding the airborne force could only proceed so far, without involving the RAF. Predictably, the Air Ministry was less than pleased at this turn of events, and produced a paper at the beginning of August 1941 which rejected the Army proposals as "unsatisfactory", because there was no prospect of employing the airborne force in offensive operations before 1943. The projected airborne brigade was thus considered "...a luxury which this country, and particularly Bomber Command, cannot afford".⁵² The Air Ministry had changed its tune by 22 August 1941, however, when it held an internal conference to discuss provision of RAF flying personnel for the airborne force.⁵³ This was followed by a high-level joint conference at RAF Army Co-operation Command headquarters on 9 September 1941.⁵⁴ Chaired by Air Marshal Sir Arthur Barratt, the meeting was attended by the heads and key members of all the organisations involved, including Rock, Gale, Cole-Hamilton and Harvey.

The outcome of the meeting was a clear delineation of responsibilities toward the parachute brigade between the Army and RAF, and recommendations for current and subsequent implementation. The parachute brigade was to be responsible for pre-drop training within established CLE guidelines, and its personnel would come under CLE control for live parachute training only. Ringway also retained responsibility for technical and equipment development, and to work out operational procedures with and for the brigade. This included training selected officers and NCOs from the brigade to act as ground instructors at Hardwick Hall, stationing an RAF parachute instructor and a five

strong RAF parachute packing section there, and seconding an RAF liaison officer to the brigade. A timetable for withdrawing Army tactical and parachute instructors from Ringway was agreed, for completion by 1 November 1941. Following a request by Brigadier Gale, it was also agreed to provide a balloon at Hardwick Hall by the same date.

Hardwick Hall was accepted as a temporary location for the brigade whilst undergoing parachute training, pending the construction of a permanent Army camp at Ringway or any future location for the PTS. In the interim, Nissen hut accommodation for two hundred and fifty pupils was to be constructed at Ringway within two to three months of the meeting. Brigade personnel were to be cycled through the PTS in fortnightly batches of two hundred, and a total of six descents was agreed as the qualification standard, consisting of two balloon jumps, and four from an aircraft - two individual and two as part of a stick. It was also recommended that one of these should be a night jump. Air requirements for tactical training after basic parachute qualification were also discussed, and it was decided to expand the CLE's Exercise Unit with effect from 1 December 1941, in order to provide combined and refresher training for brigade parachute personnel.⁵⁵

There was only one minor amendment to the conference conclusions. Six days later the CLE requested that Army personnel be subject to RAF administrative and disciplinary control whilst undergoing training at the PTS.⁵⁶ This was endorsed on 29 September 1941, in the same War Office communication that confirmed Gale as OC 1st Parachute Brigade, and delineated his responsibilities;⁵⁷ the Air Ministry received the news at the beginning of October 1941.⁵⁸

The War Establishment (WE) for 1st Parachute Brigade was also settled by the beginning of October 1941. This consisted of a brigade headquarters, and three parachute battalions of three rifle companies each. The basic parachute building block was the section of ten men, commanded by a sergeant rather than a corporal as in line units. This meant that parachute battalions had a much higher senior NCO ratio, a measure intended to counteract possible dispersal on landing. A RE Air Troop of four officers and sixty men was also attached to the brigade, along with a skeleton signal staff.⁵⁹ The War Office also pushed ahead with preparations for the establishment of a glider brigade at this time. On 10 October 1941, all Army Home Commands were officially notified that 31 Independent Brigade Group, currently undergoing mountain training in North Wales, was to become an Airlanding Brigade Group. The memo laid out the new unit's projected roles and WE, and included a report from the AFE on preliminary trials with the Horsa glider, with details of possible load combinations.⁶⁰

Thus, in the period July to October 1941, the War Office had finally achieved a workable relationship with the Air Ministry, and had a mutually agreed programme for training a parachute brigade. It had also laid the groundwork for the establishment of a more heavily equipped glider brigade, which could be developed further once the necessary gliders arrived. This was spectacular progress when measured against previous achievements, but should not divert attention away from the fact that the Army did little to expedite airborne matters in the period up to July 1941. It can thus be argued that the swift progress between July and October 1941 was due to a combination of favourable circumstances and pure luck, rather than design. As we have seen, additional elements within the RAF had become converted to the airborne cause, which significantly lessened opposition from that quarter. These conversions were coincidental rather than the result of deliberate Army cultivation, however, and must therefore be attributed to the same strand of luck which placed airborne supporters in control of Army decision-making machinery at the same time. Had Dill and Alanbrooke not been staunch supporters of the airborne idea, or, if there had been more serious resistance to the diversion of sorely needed troops from within the Army, events could have gone very differently.

Of course, the dire straits in which the Army found itself in 1940-41 should be taken into account as mitigating factors in this analysis. The formation of Commando and airborne forces, simultaneously with preparing to repulse seemingly imminent German invasion and rebuilding the Army proper following the debacle in France, was a noteworthy achievement in itself. On the other hand, shortage of personnel and equipment should not have precluded the Army from carrying out research and even some limited operational and doctrinal development, if only on paper. This it did not begin to do until June 1941, however, and even then the receipt of information from outside the British military structure prompted it.

III. Unacknowledged but Plagiarised Nonetheless: The Polish General Staff Contribution to Defining the British Airborne Role

On 9 June 1941, Colonel Marecki from the Polish General Staff in London passed a paper and request to visit Ringway to Brigadier Gubbins at the War Office, intended for Colonel "de Rock" at the CLE.⁶¹ Gubbins acknowledged receipt of the paper on 20 June 1940,⁶² and passed it straight to Rock for comment.⁶³ Rock's immediate reaction was candid about the paucity of British work in this area:

“Colonel Marecki's paper is most interesting and I hesitate to comment on it, since we have never produced any detailed, connected instructions of the same

sort ourselves. The reason is that, in the present phase of parachuting, anything one can say is a little academic. We have, however, produced one paper on the use of parachute troops, for the benefit of Home Forces, but I don't think it has got beyond [War Office department] MT 1. If Colonel Marecki would like a copy, I will send him one, but he must understand that it is unofficial. I enclose a copy of my comments on his paper, offered rather tentatively".⁶⁴

This also implies that Rock realised that he was rather too close to the trees to see the wood. This was the inevitable result of placing responsibility for all the Army side of airborne training, research and development on the shoulders of one relatively junior officer. Thus the blame for this lapse lay with the War Office, rather than with the man on the spot, although Rock's excuse rings rather hollow considering that the Poles had managed to produce their paper under pressure at least equal to that under which the British were labouring. Before examining the Polish paper in the detail it merits, it will be necessary first to outline briefly British thinking on the matter to allow meaningful comparison.

Prior to the emergence of the Polish General Staff paper, War Office thinking on the role and practical insertion of its airborne force remained rather general. It was based upon Rock's paper of July or August 1940, when he suggested that the airborne force be used to spearhead a cross-channel invasion,⁶⁵ and upon a further paper from October 1940. The latter recommended six functions for the airborne force, including acting as an offensive spearhead and acting as a self-contained force capable of localised and independent actions.⁶⁶ This was fleshed out slightly by the War Office in January 1941, which listed possible airborne missions as cutting off enemy units from reinforcement, attacking the enemy rear in conjunction with land forces, capturing airfields and carrying out "other enterprises".⁶⁷ This, however, was as far as consideration of practical applications and procedures went, with the Army concentrating its attention upon formulating tables of organisation and equipment rather than how they were to be used.

The Polish General Staff paper took the opposite tack, by concentrating on practical rather than organisational matters. The paper was nine pages long, and contained thirty-eight headed sections, arranged in four parts. It began by stating that the paper was intended as a guide for parachute operations up to battalion strength. This was followed by a brief examination of the purpose of parachute units, which was defined as being offensive operations "framed by tactical and operational actions". These were categorised as offensive land action, sea landings and air landing of major forces in transport aircraft. Their employment was summarised in forthright terms. "...recklessness of action, the

quickness and energy of its execution, the fullest and most efficient utilisation of all available means of combat are basic elements to ensure success."⁶⁸

The remaining thirty-four paragraphs of the paper examined virtually every facet of putative parachute operations under the main headings "Co-operation with the Air Force", "Decision to Employ Parachute Units and Directions for this Action", and "Co-operation with Land Forces". These ranged from delineating command responsibilities between air force and army commanders at different stages during parachute operations, suggesting procedures and prerequisites for launching a parachute operation, drills for landing on or wide of the designated target, actions for opposed and unopposed landings, post-drop assembly, action on achieving the objective, and specific recommendations for parachute units supporting air landing, armoured or amphibious operations. More mundane matters, such as communications within parachute units and the treatment of POWs, were also covered, although the rather terse treatment of the latter creates the inference they were to be dealt with out of hand.⁶⁹

Rock's admission that the Polish paper was detailed, connected and far ahead of British airborne thinking was therefore more than justified. This view was further confirmed by his comments following a more thorough analysis of the paper; Rock only felt qualified to comment upon two of its paragraphs, those dealing with post-jump reorganisation and daylight parachute insertion protected by fighter aircraft.⁷⁰ He suggested that dawn was the most suitable time for parachute attack, and also that a distinction be drawn between large and small parachute operations depending on the number of aircraft employed. The former corresponded roughly to a battalion plus, and the latter lay between platoon and company strength. Rock also opined that a descent within five hundred yards of an occupied objective was suicidal, and pointed out that larger forces required more time to reorganise, and therefore should be inserted at a greater distance from the objective. He was also felt that drops at dusk or after dark held the best prospect of success, although he also acknowledged that re-assembly difficulties meant that this was only really suitable for small-scale operations. This was justified on the grounds that large-scale parachute attacks would be "very rare" in war, because of expected difficulties in achieving and maintaining air superiority.⁷¹

Rock's comments are particularly interesting because they cast light upon thinking at the hub of the British airborne effort. In particular, they suggest that, despite the attention paid to the large-scale German operations in the Low Countries and Crete, British airborne thinking remained blinkered by a combination of the paucity and unsuitability of its

equipment, and by the wider and largely negative British war experience to that date. Concern over post-drop reorganisation, for example, must have stemmed from the Whitley's awkward accommodation and exit. This lengthened the time it took for a stick of parachutists to leave the aircraft, which translated into wide dispersion of the stick by the time it reached the ground, and thus exacerbated problems with re-assembly. Similarly, the concentration upon small-scale operations stemmed from the lack of aircraft for anything larger, operationally or otherwise, and also the raiding impulse under which the British airborne force had originally been established. The automatic assumption of German air parity, if not outright superiority, was clearly the result of events in France in May and June 1940, and more recently in the Mediterranean. The German airborne invasion of Crete probably loomed large in this respect. It is also interesting to note that the Army officer most closely involved in British airborne development at this time appears to have had little faith in the utility of the brigade organisation then being pushed ahead by the War Office.

On the other hand, Rock questioned the utility of the battalion unit in parachute operations, suggesting that brigade or even divisional airborne units would be a more suitable step up from company level operations. He also recommended that more emphasis be placed upon aerial bombing in lieu of airborne artillery, including time-on-target (TOT) night raids to provide cover for airborne insertion.⁷² Rock's final comment questioned the viability of Polish command and control proposals. The Poles advocated commanding airborne operations by radio from one or more aircraft orbiting over the battlefield. Rock pointed out that ground radios were much more powerful than aerial sets, and suggested that parachute forces should be equipped with equipment to allow them to communicate directly with friendly ground stations instead. He also disagreed, quite sensibly, with the Polish idea of allowing the air commander to retain control of the parachute force after landing, on the grounds that such an arrangement would be poorly placed to make tactical decisions.⁷³ Both these criticisms were eminently sensible, because the Polish proposals were somewhat over-enthusiastic. Relying on aircraft communications and control not only assumed air superiority for the attacking force, but also entailed risk from ground fire or mechanical failure, as well as the technological drawbacks cited by Rock.

That Rock only felt qualified to comment upon two points from such a large and detailed document also clearly illustrates the British failure to think much beyond their immediate airborne circumstances. The British paper on parachute troops, which Rock "unofficially" passed to Marecki via Gubbins shortly after 6 July 1941,⁷⁴ clearly illustrates this. As we

have seen, the Polish GS paper was overwhelmingly concerned with the practicalities of parachute operations. In contrast, its British counterpart was by its own admission intended primarily to familiarise non-airborne commanders and staffs with parachute forces, in order to assist in joint training and defence against airborne attack.⁷⁵ It was therefore high on administrative detail, but correspondingly low on practical information.

Rock began with a précis of airborne operations to date, which stressed the decisive nature of the German airborne operations in the Low Countries in May 1940, before examining the prime characteristics of parachute troops. Foremost of these was surprise, in order to hit "...the enemy in the back and below the belt." Details of British paratroop equipment, weaponry, jump procedures and drills, and a list of likely tasks followed this rather awkward contortion. The listed tasks included the seizure, defence and preparation of landing zones, diversionary attacks and the disruption of enemy communications in advance of the main airborne force. Secondary tasks included attacks in conjunction with friendly ground forces, the seizure of water crossings or defiles, feint attacks to draw off enemy reserves, and sabotage. All this, however, took up less than half of the paper. The remainder, headed "Staff Duties in Connection with British Paratroops", dealt with administration, including lead times for warning orders, transport and messing arrangements, and the establishment of lines of communication between air and ground commanders during operations. It closed with small sections on defence against paratroops, and the use of paratroops in joint training exercises.⁷⁶

In comparison with the Polish General Staff paper therefore, the British effort appears to be very much a case of putting the cart before the horse. In mitigation, it must be acknowledged that this was largely because the initial British airborne approach was obliged to concentrate upon infrastructural rather than operational development. It may also be partly because the Army had a long history of improvisation, and thus took the ability to formulate drills, procedures and other organisational details at short notice for granted. In addition, given his existing responsibilities at the CLE, Rock can be forgiven for not finding time to consider the nitty-gritty of airborne employment in the same way as the Poles. However, this does not absolve the War Office from failing to try, particularly considering the amount of effort expended in the formulation of hypothetical brigade organisation tables.

What the Poles made of Rock's paper is not clear, although Marecki did succeed in obtaining access to Ringway, along with American observers, at the beginning of July 1941.⁷⁷ For their part, the British appear to have been more impressed with the Polish

paper than their overt reaction would suggest. The practical details of employing the new British airborne force had to be discussed at some stage, but the emergence of British discussion documents immediately after the Polish General Staff arrived at the CLE is stretching the concept of coincidence. This suspicion is reinforced by the fact that there is no primary evidence of prior British discussion, and by the similarity of the British topics to those formulated by the Poles. On 21 June 1941 the CLE's Army staff produced a four-section paper, ostensibly dealing with co-operation between the RAF Co-operation Command and parachute troops. Part of it certainly fell within this remit, but the remainder dealt with the subsequent use of paratroops to influence the immediate battle situation, and the transmission of tactical information from parachute troops to ground formations.⁷⁸ This was not only remarkably similar to sections of the Polish paper, but was also a totally new line of thought for both Ringway and RAF Army Co-operation Command, and arguably outside the latter's official remit.

In addition, the 21 June paper was but the first of a series of studies emanating from the CLE which bore more than passing similarity to topics examined by the Poles. These included one discussing issues surrounding airborne coup-de-main operations to secure bridgeheads for advancing armoured forces,⁷⁹ and another which took a wider and more doctrinal approach. The latter analysed five likely roles for airborne employment, and cited aspects of German operations in 1940 and 1941 in support. Thus the assault on Eben Emael was seen as a parallel for attacking beach defences or seizing bridgeheads, whilst operations in Norway and the Corinth Canal in Greece were characterised as tactical operations to give indirect assistance to friendly ground operations. The larger airborne assault upon Holland was considered a useful template for strategic operations intended to influence the course of a whole campaign. Other examples cited included Crete, which was classified as an independent airborne operation against an isolated objective, and the German air landing of reinforcements in Norway. This was considered of possible utility in Iraq,⁸⁰ an observation which may have been intended to be somewhat tongue in cheek, given the fact that British forces had been carrying out that type of operation in that region since the 1920s.

Of course the CLE, and by extension the War Office, would have been blinkered to the point of stupidity had they not paid attention to the Polish paper. It complemented what little British thinking there was, and offered a firm basis for further investigation, if not a significant developmental shortcut. The real fault with the British reaction to the Polish paper is therefore not the fact that they plagiarised it, but that they failed overtly to acknowledge the fact, either at the time or subsequently. There is no mention of it in

Otway's official history of British Airborne Forces, for example, and it does not figure in any of the secondary works either. Had the paper been the only Polish input to the expansion of the British airborne force, this could perhaps be written off as an unfortunate oversight. However, this was not the case, for the Poles made a number of practical contributions to the British airborne effort. These too have gone largely unremarked in the British record.

IV. Similarly Unacknowledged: Polish Practical Input to British Parachute Training and Equipment

Polish practical input into the British airborne effort encompassed both the training side of matters at Ringway, and the conditioning and preparation of troops to undergo that training, which was to be a key requirement in the expansion of the British parachute force to brigade size. With regard to Polish involvement at Ringway, at least three Polish air force officers served there. Lieutenant Bleicher, a former instructor from the Polish State Gliding School, served at the Development Unit (DU), and gave a lecture on Polish gliding experience in May 1941.⁸¹ Two other Polish lieutenants played a more significant role at the Parachute Training School. Jerzy Gorecki and Julian Gebolys had been parachute instructors at the Polish parachute-training centre at Bydgoszcz before the outbreak of war in 1939, and appear to have been at Ringway when Polish special forces soldiers arrived there for training in October 1940.⁸² As Cholewczynski points out, Gorecki and Gebolys were the "natural choices" for training Polish pupils at the PTS. The operational records make no direct reference to the arrival of the two Polish officers at Ringway, although there is a cryptic reference to "... new Polish officers [being] separated for Special Parachute Instruction" at Ringway at the end of September 1940.⁸³ This could refer to the arrival of Gorecki and Gebolys, or the first increment of Polish special forces soldiers.

There is ample additional evidence that Gorecki and Gebolys served as instructors at Ringway. Colonel Jan Lorys, who participated in one of the first Polish special forces training courses and later served with the 1st Polish Independent Parachute Brigade at Arnhem, distinctly remembered Gorecki heading a "Polish section" at Ringway when he underwent training there in the autumn of 1940.⁸⁴ In mid-July 1941 Gorecki himself penned a letter on Ringway-headed notepaper,⁸⁵ and Gebolys appears in the minutes of a joint conference between the Polish General Staff and the Airborne Forces Establishment (AFE) in November 1941. The latter was by then serving as a RAF Flying Officer, and had requested a transfer to the Indian PTS at Chaklala. The Polish General Staff response shows that it was in no doubt as to Gebolys's value as an instructor: "...in view of his

[Gebolys's] special qualities the Polish Command cannot release him for this purpose as he is a most valuable instructor for the training of Poles". The Polish General Staff also suggested that Gebolys be promoted in recognition of his expertise, a request which Group Captain Harvey asked be put in writing with a promise that Gebolys would then be posted to the AFE with the rank of Flight Lieutenant.⁸⁶

It would therefore appear that up to this point Gebolys had been serving at Ringway as an attached supernumerary rather than as part of the permanent cadre, despite his nominal RAF rank. This may also explain his transfer request, for it must also have been somewhat galling to serve under men who had far less parachuting experience. Gebolys's position was thus similar to that of Williams, Ward and Hire following Strange's departure and the elevation of Newnham as commander of the PTS, although they of course lacked the backing of a General Staff, exiled or otherwise. The tone of Harvey's reaction at the conference also suggests both that he was aware of Gebolys's presence at Ringway, and that he shared the Polish General Staff's high opinion of him. Given this, it is highly likely that Gebolys was involved in training the large batches of Polish troops who began to arrive at the PTS from mid-April 1941,⁸⁷ and possibly also the earlier and smaller Polish special forces contingents. He also appears to have accepted the refusal of his request for transfer and remained at Ringway. Polish primary material shows that Newnham consulted Gebolys about including a night jump in the training of Polish paratroopers in June 1942.⁸⁸

That Newnham consulted with Gebolys is additionally interesting because it ties in with another significant aspect of his contribution to British military parachuting. According to Cholewczynski, Gebolys was responsible for introducing the British, and later the Americans, to the idea of the parachutist manipulating the rigging lines to spill air from the canopy, in order to exert a limited degree of control over the parachute during descent. This technique was allegedly christened the "Polish Method" as a result.⁸⁹ Newnham makes no specific mention of Poles serving at Ringway in his semi-official history of the British parachute effort, apart from a passing reference to a "number of Polish interpreters".⁹⁰ Paradoxically, however, he subsequently refers to "Gebolys, the Polish instructor, who was probably one of the best parachutists in the world", before also crediting him with inventing the "Polish Method" cited by Cholewczynski.⁹¹ Newnham's account is light on chronology, and he does not provide a date for Gebolys's development, although there is primary evidence to suggest that this occurred in April 1941. The operational records refer to a new parachuting technique being standardised then, and describe Gebolys's method perfectly, albeit without mentioning his name or origins.⁹² The

technique is also described in a memo from the CLE to No. 70 Group in June 1941, in response to concerns raised about landing injuries at the parachute demonstration held at Windsor in late May 1941.⁹³

There can thus be no doubt that Polish instructors served at Ringway, and made at least one significant contribution to British military parachuting technique, despite the fact that they are not overtly accredited in the official accounts or operational records. Newnham's omission may have been an oversight, for his account, whilst extremely detailed, is more of a personal narrative than the product of systematic research. The failure of the official and operational records is more curious, however, especially because it is paralleled by a similar failure to acknowledge the influence of Polish training in what eventually became the 1st Polish Independent Parachute Brigade. Before examining the content of this, however, it may be advisable first to detail briefly the evolution of the Polish parachute effort in Britain.

The impetus for raising Polish parachute forces in Britain came from the Polish General Staff established in London in late June 1940. The first Polish parachute unit was raised at the behest of the Sixth (or Special) Bureau, which paralleled the work of SOE and was responsible for liaison with the underground Home Army in Poland.⁹⁴ Drawn largely from Polish officer personnel evacuated from France, it was christened the *Cichociemni*, Polish for "Silent and Unseen", and was intended for covert operations.⁹⁵ The first contingent of *Cichociemni* volunteers, twenty officers drawn from the Polish 4th Cadre Rifle Brigade, arrived at the Special Training Centre (STC) at Lochailort near Fort William in Scotland, in September 1940.⁹⁶ All *Cichociemni* volunteers subsequently received parachute training, although whether this was all carried out at Ringway is unclear.⁹⁷ It is also unclear precisely when and from where the first Polish personnel commenced their training at Ringway. The operational records clearly refer to Polish personnel arriving for training on 28 October 1940, although the commander of the 4th Cadre Rifle Brigade, Colonel Stanislaw Sosabowski, claims that the first group of *Cichociemni* trainees from his unit did not arrive at Ringway until February 1941. It is possible that the October 1940 trainees were drawn from elsewhere, or that increments of the 4th Cadre may have been diverted to Ringway after leaving their parent unit.⁹⁸ Be that as it may, at least two contingents of Polish officers were parachute trained by 14 March 1941, for they carried out a demonstration drop for Sosabowski on that date.⁹⁹ A further twelve numbered all-officer Polish courses were trained at Ringway by mid-August 1941, totalling fourteen courses in all.¹⁰⁰

A much larger and more ambitious Polish airborne undertaking followed the covertly oriented *Cichociemni* effort: the transformation of the entire 4th Cadre Rifle Brigade into a parachute unit. Sosabowski's involvement with this transformation, and the origins of the 4th Cadre itself, merit some clarification. Sosabowski escaped from Poland in 1939, served with the reconstituted Polish army in France in 1940, escaped again to Britain from Dunkirk, and ended up in Glasgow with many other evacuated Polish personnel. His efficiency in organising a holding camp at Biggar brought him to the attention of the senior Polish commander in Scotland, and he was placed in command of the Canadian Officers Cadre Brigade in July 1940.¹⁰¹ As its name suggests, this unit was intended to provide the commissioned component for a plan to raise units in Canada from Polish émigrés there. The brigade was renamed the 4th Cadre Rifle Brigade in mid-August 1940, and was assigned a coastal defence role in Fife in eastern Scotland in October 1940, occupying billets around Leven. The brigade's origin as an officer cadre explains why the early contingents of Poles trained at Ringway were all of commissioned rank.¹⁰²

Sosabowski claimed to have single-handedly formulated the idea of transforming the 4th Cadre Rifle Brigade into a parachute unit, as the "shortest way home" to Poland, a view widely cited in secondary sources.¹⁰³ However, whilst he was undoubtedly one of the key players, this may be overstating his overall responsibility. According to one account, the original impetus for members of the 4th Cadre to attend Ringway for training came from the Polish General Staff, rather than Sosabowski, albeit "unofficially".¹⁰⁴ This claim is supported by the fact that Sosabowski appears to have been unconnected with the compilation of the Polish General Staff airborne paper, and the fact that the Polish Army had been pursuing its own parachute programme before September 1939, which Sosabowski appears to have been unaware of. This would suggest that the parachute idea originated higher in the Polish military hierarchy. Wherever the idea originated, however, Sosabowski was undoubtedly responsible for training the 4th Cadre for its new role, and for setting up the necessary ground training facilities in Scotland independently of Ringway. A Polish preliminary parachute-training centre was established in the grounds of Largo House, an eighteenth-century mansion near Leven, and was ready to begin work in February 1941.¹⁰⁵

The Polish effort commenced without official guidance from British forces, although knowledge of British techniques was doubtless gleaned from Polish personnel who had trained at Ringway, and through unofficial contacts with the CLE. The operational records, for example, record that two Polish officers visited Ringway on 21 July 1941, in order to gather information for the formation of a Polish brigade.¹⁰⁶ Despite the tone of the

entry, this was by no means the beginning of the Polish efforts, but it proves that Ringway was willing to offer the Poles assistance. This was subsequently established on a more official basis, as shown by the authorisation for CLE Whitleys to participate in a Polish parachute demonstration in Scotland in September 1941. The fact that the Poles routed their request through high-ranking officers at the War Office and Air Ministry, complete with invitations to the demonstration may well have eased the granting of approval.¹⁰⁷ Assistance was dependent upon British needs and equipment availability, as the refusal of an earlier Polish request for their own dedicated aircraft shows,¹⁰⁸ but overall the British appear to have been initially favourably disposed toward the Polish effort.

That the Poles were aware of the specifics of British airborne equipment is clear from the mock Whitley exits fabricated at Largo House. Open-ended barrels were mounted in the loft of a stable block, which allowed trainees to practise exit drills, by dropping through the barrels onto PT mats spread on the floor below.¹⁰⁹ According to a British observer, there were three such mock apertures offering drops of five, six and eight feet, into sawdust and sand rather than onto PT mats.¹¹⁰ Whatever the precise details, the existence of such apparatus shows that the Poles were familiar with the Whitley's peculiar exit, and that they were quite capable of improvising their own training equipment and techniques. These solutions were inspected, and in some cases, copied by the British.

The Poles went some way to overcoming their lack of access to aircraft by erecting a parachuting tower. Located at Ludlin Links near Leven, the structure was between sixty and one hundred feet high, and was similar but not identical to those used for sport parachuting in Poland in the 1930s. A cable from a drum atop the structure was held clear by a projecting arm and attached to a parachute, which was kept extended by a metal hoop the same diameter as the canopy. The cable was raised and lowered by compressed air, and the instructor controlled the rate of descent by means of a brake. This system also allowed the instructor to coach the trainee throughout the process. The platform atop the tower accommodated ten trainees, and was accessed by ladder.¹¹¹ The Polish General Staff granted authorisation for Polish Army engineers to erect the tower, along with a £500 grant toward the cost, in January 1941.¹¹² According to Cholewczynski, two Polish engineer officers drew up blueprints with advice from Gebolys, whilst the actual construction was contracted out to a local Scottish firm. The tower was ceremonially opened on 20 July 1941.¹¹³ The six-month delay between authorisation and completion was presumably due to difficulties in obtaining the necessary materials due to wartime shortages.

The Polish tower proved its worth in late 1941, when large numbers of Polish troops who had received preliminary training at Leven began to pass through Ringway. Polish training-related injuries were conspicuous by their absence, as noted by an unnamed British member of the PTS staff: "The Poles are very consistent, so far, no injuries, even of a minor character have been sustained".¹¹⁴ Given this, it is therefore no surprise that a similar tower subsequently made an appearance at Ringway. Precisely when the tower was erected at Ringway is unclear, for there is no reference to it in the operational records. Given that CLE staff carried out a detailed examination of the Polish example in July 1941, it is logical to assume it was sometime after that date.¹¹⁵ Photographs in Harclerode's work on the British 6th Airborne Division clearly show that the tower was in use at Ringway when personnel for the 6th Airborne were undergoing parachute training in mid-1943.¹¹⁶ The same work also acknowledges the Poles as the originator of the idea, unfortunately without citing a source.¹¹⁷

It would be an overstatement to claim that the Polish example was solely responsible for this. According to Ward, Bruce Williams had unsuccessfully recommended a tower as an alternative to the balloon for preliminary parachute training, when the latter was under consideration.¹¹⁸ There may also have been an American angle to the British adoption of the idea. The parachuting tower had been an integral part of US military parachute training from the outset,¹¹⁹ Ringway had played host to US officers in April and July 1941, and it is feasible that some interchange on training techniques occurred during these visits.¹²⁰ Nonetheless, it cannot be entirely coincidental that the British adopted a previously rejected training device after inspecting the functioning Polish example at Ludlin Links.

A further Polish innovation was the pre-parachute training set up in the grounds of Largo House. Nicknamed the Monkey Grove, the centre consisted of a large assault course equipped with a variety of obstacles, and facilities for more conventional PT. These included fences, rope climbs, swings, jumps and a trapeze apparatus, the purpose of which was to harden physically the trainee in preparation for parachute training proper.¹²¹ Cholewczynski paints a vivid portrait of activity at the Monkey Grove:

"In a thickly wooded corner of the estate, the [Polish] Brigade's sappers... built an obstacle course of devilish contraptions which stretched every muscle and honed minds and body for the rigors [sic] of parachute training. Men, scantily clad in athletic shorts, were swinging on trapezes, walking balance beams, climbing, jumping, tumbling, all at double time with instructors constantly shouting".¹²²

The essential features of the Monkey Grove, and indeed the entire Polish preliminary training effort, were subsequently incorporated into what became the Airborne Depot at Hardwick Hall, which was intended to fulfil the same purpose. The primary purpose of the Depot was the “toughening” of prospective parachute training candidates for the rigours of the PTS, including a series of tests to ensure their physical and mental suitability.

To claim that the Polish Preliminary Training Centre based around Largo Hall was solely responsible for the British decision to set up a similar installation would again be overstating the case. There was clearly a need for a British preliminary airborne training establishment of some description, and the formation and training of the Commandos provided a clear and relevant British precedent for just such a development. That said, it is also possible that the CLE inspection of the Polish facilities in Scotland was arranged for the specific purpose of gathering data for use at Hardwick Hall. Initially this appears unlikely, because the CLE report did not appear until 27 July 1941,¹²³ four days after the decision to set up a British preliminary training centre at Hardwick Hall was finalised.¹²⁴ However, the agenda for that conference was compiled by 17 July 1941,¹²⁵ and it is clear from the conference minutes that the decision to set up a British preliminary training establishment had already been taken, leaving only the location to be settled.

This supports the contention that the CLE tour of the Polish establishments in Scotland was arranged in order to gather information for the 23 July conference, and there are several possible explanations for the date anomaly. The degree of detail contained in the report makes it logical to assume that the four Polish establishments discussed were visited in person by at least one member of the CLE staff. An official visit of this kind must have been arranged in advance, if only to allow the necessary transport and accommodation to be arranged, and the installations visited were in one instance over one hundred miles apart. It is therefore unlikely that they were all visited in a single day.¹²⁶ Travel requirements alone make it perfectly possible that the visit could not be scheduled in time to present its findings for the 23 July conference, and it is also unlikely that the report was compiled the instant the inspection was over. In addition, there was no real need for the report to be presented to the conference if, as it appears, the decision to set up a preliminary training establishment had already been made. Neither was the CLE visit the last to Leven. An unknown major from the War Office wrote to Sosabowski on 20 August 1941, having been favourably impressed with all he had seen “last week”.¹²⁷

The final area where Polish developments may have influenced British thinking involved the selection of personnel for parachute training. As we have seen, Rock presented a series

of options to address this problem on 7 July 1941, the most radical of which was a proposal to scrap the voluntary principle and convert infantry battalions in their entirety after separating the medically unfit.¹²⁸ Whilst obliged by circumstances, and proven by subsequent events, this idea was a total departure from prior British practice, which had never been even hinted at previously. It was, however, the method chosen by Sosabowski for the formation of the Polish parachute brigade. Members of the 4th Cadre Rifle Brigade were not given a choice about becoming paratroopers, and only those who failed to pass a medical board, allegedly set up with advice from Ringway, were released for service with Polish units elsewhere.¹²⁹ According to Sosabowski, this policy was adopted to ensure “equality of sacrifice”,¹³⁰ although he must have had an ulterior motive. The supply of Polish recruits to maintain Polish units in Britain was beginning to run short by 1941, and competition was fierce for those available.¹³¹ This largely explains the substantial diplomatic effort to secure the repatriation of Polish POWs from the Soviet Union at this time. Had he adhered to the voluntary principle, Sosabowski therefore ran the risk of losing personnel who opted out of parachute training, with little chance of finding replacements.

Precisely when Sosabowski decided to scrap the voluntary principle is unclear, although it is logical to assume it coincided closely with the decision to transform the 4th Cadre Brigade into a parachute unit, given the circumstances cited above. The fact that the Polish General Staff sanctioned the construction of the Polish parachuting tower in January 1941, and that Sosabowski claims the preliminary training centre at Largo House was functioning by February 1941,¹³² provisionally dates the decision to scrap the voluntary principle to late 1940 – early 1941. Given the degree of “unofficial” liaison between Ringway and the Poles, and the fact that Sosabowski visited Ringway in person in March 1941,¹³³ it is perfectly possible that Rock’s suggestion that British non-volunteer parachute units be formed was influenced by knowledge of the functioning Polish example.

Any or all of the similarities between all these aspects of Polish and British airborne development may have been coincidental and therefore unconnected, although their sheer number makes it unlikely. It is therefore more probable that the Polish input to the British airborne effort was deliberately downplayed. Initially, this may have been because of the “unofficial” nature of the liaison, but the later motive lies in the subsequent relationship between the allies, especially regarding operational control of the 1st Polish Independent Parachute Brigade.

From a British perspective, the Poles proved to be less than co-operative allies. This was due to their vehement insistence that their units remain operationally independent of British control, and answerable directly to the Polish General Staff and Polish government in exile. This tendency was not confined to Sosabowski's parachute brigade. Garlinski's work on relations between the Poles and SOE shows that the Polish General Staff's Sixth Bureau was reluctant to integrate its covert operations with those of the SOE virtually from the outset, to the latter's increasing annoyance.¹³⁴ There is also evidence that the Poles took less than kindly to the British style of discipline. Sosabowski wrote to the commander of the STC, requesting clarification of unspecified disciplinary problems with Polish trainees at Lochailort, at the beginning of January 1941.¹³⁵ More problems arose a year later. The STC contacted Sosabowski in March 1942, suggesting Polish officers be made aware of British disciplinary requirements, and that a Polish liaison officer be attached to the STC staff.¹³⁶ There also appears to have been friction at this time over Polish treatment of trained men who refused to jump. The War Office forwarded a detailed explanation of the relevant Section of the British Army Act to 1st Polish Independent Parachute Brigade on 25 February 1942, along with a full translation of the Army Act in February 1941.¹³⁷

With specific regard to Sosabowski's parachute brigade, Anglo-Polish relations took a turn for the worse once the Poles had completed their initial parachute training, and following the establishment of the British 1st Airborne Division in November 1941.¹³⁸ The new division's commander, then Brigadier F. A. M. Browning, attended the Polish parachute demonstration in Scotland on 23 September 1941, at which Sosabowski's brigade was officially re-christened the 1st Polish Independent Parachute Brigade. The exercise was held in honour of the Polish Commander in Chief, General Sikorski, who issued specially commissioned Polish parachute qualification wings at the end of the exercise;¹³⁹ the Polish General Staff confirmed the change of title on 4 October 1941.¹⁴⁰

Browning decided that a complete and fully trained Polish parachute brigade was too useful an asset to ignore, and Dover neatly sums up the British view of subsequent developments:

“At first, Browning was most enthusiastic about the Polish Brigade, and gave Sosabowski every support in acquiring accommodation, supplies and equipment. However, as time passed he noticed that the Polish Brigadier...was reluctant to show any enthusiasm for, or understanding of, the suggestion that his Brigade be attached to one of the British airborne divisions...He [Sosabowski] just could not understand that private, nationalistic wars were unacceptable, not only to Browning but also to the Allied

command... Sosabowski continued to complain that he had insufficient time to train his troops – although he had longer than anyone else. He stressed that his Brigade was under strength. So intense was his desire to carry out an operation in his native Poland that he may have exaggerated these handicaps. If his unit was not committed to battle until the final stages of the war, then the chance of its being engaged at full strength in the liberation of Poland would be that much greater.”¹⁴¹

The Poles, understandably, saw matters rather differently, and doubtless considered that their input to the British airborne effort offset any perceived requirement for gratitude. Nonetheless, the British ultimately gained control of the 1st Polish Independent Parachute Brigade in June 1944, and it became part of the British 1st Airborne Division on 10 August 1944.¹⁴² Sosabowski, however, deepened his existing unpopularity with his British allies by raising objections to the plan for Operation Comet, which ultimately became Operation Market Garden.¹⁴³ He then compounded this error by being proved right, by reacting angrily to what he rightly viewed as British incompetence at a staff conference at Valburg during the Arnhem battle, and then criticising Browning in person.¹⁴⁴ In the opinion of Colonel Lorys, who was then serving as a captain on Sosabowski’s staff, “This was probably the final nail in Sosabowski’s coffin, daring to criticise British generals”.¹⁴⁵

Although Lorys was speaking with hindsight, his verdict is borne out by events after Arnhem, which clearly illustrate the depth of British enmity toward Sosabowski and, to a lesser extent, his brigade. On 17 October 1944 Montgomery unfairly and inaccurately criticised the performance of the 1st Polish Independent Parachute Brigade at Arnhem to the CIGS, and requested that the Brigade be removed from his command.¹⁴⁶ On 20 November 1944, Browning sent the assistant CIGS a damning critique of Sosabowski’s performance as commander of the 1st Polish Independent Parachute Brigade before and during the battle of Arnhem. This characterised him as rigid, difficult and unwilling to perform his full part in events, and closed with the recommendation that a younger and more pliant individual replace Sosabowski. The Polish president in exile duly relieved Sosabowski of his command on 9 December 1944, although the wording of the letter informing him of the decision implied that it was done under British pressure. Some of his erstwhile Brigade went on hunger strike in protest at this blatant injustice, but to no avail.¹⁴⁷

It is hard not to agree with Middlebrook’s view on Sosabowski’s treatment by his so-called allies:

“It seems likely that the commanders in...[the]...ground-force chain of command Thomas-Horrocks-Dempsey-Montgomery found that blaming

Sosabowski and his brigade was a convenient way of deflecting blame from the failure of the ground forces to reach Arnhem. Browning...may have been persuaded to write that damning letter to the Deputy CIGS which resulted in Sosabowski becoming the scapegoat. It was a shameful act by the British commanders".¹⁴⁸

The fact is that Sosabowski had marked himself out as an awkward customer long before the battle at Arnhem, through his resistance to British control of his brigade, which means that Browning also had a motive to participate in his downfall.

The scapegoating of Sosabowski and the 1st Polish Independent Parachute Brigade thus provides a compelling explanation for the British failure to acknowledge overtly the full extent of Polish input into the establishment of their own airborne force. It is significant in this regard that there is no mention whatever of the part played by the Poles at Arnhem, or indeed of the 1st Polish Independent Parachute Brigade, in the official history of the British airborne divisions published in 1945.¹⁴⁹ The situation in Otway's more exhaustive 1950 official history is only marginally better. The 1st Polish Independent Parachute Brigade is listed in 1st Airborne Division order of battle, but the formation of the Polish brigade receives only a passing mention, and their activities at Arnhem, whilst acknowledged, are restricted to the barest bones.¹⁵⁰ The reason for this is clear. The scapegoating of Sosabowski and his men was still fresh in mind when these accounts were compiled in the immediate post-war period. More importantly, the officers who had orchestrated the episode were still amongst the most senior in the British military hierarchy. It would therefore have been impolitic, not to say foolhardy, for the officers involved in compiling the official accounts to challenge received wisdom, even in the unlikely event that they had access to all the facts.

However, all this lay far in the future. The important point is that there can be little doubt that the Poles provided valuable theoretical and practical assistance to the early British airborne effort. All that remains is to examine the process which that assistance tied into, the creation of the British 1st Parachute Brigade.

V. Churchill's Vision Realised at Last: 1st Parachute Brigade Becomes Reality

Among the first questions to be answered with regard to the formation of 1st Parachute Brigade was what to do with 11 SAS Battalion. The option favoured by the War Office was to disband the unit, whilst retaining some of its personnel as instructors at the CLE, and some as a cadre for distribution across the brigade. A telegram to this effect was

despatched to 11 SAS Battalion on 15 July 1941, which required the battalion staff to categorise and return details of personnel suitable for such future service within three days.¹⁵¹ The War Office preference was prompted by the rather unreliable reputation 11 SAS Battalion had acquired. In part, this was due to Army dissatisfaction with the Commando terms of engagement under which the Battalion's personnel were serving, which had been long been considered inimical to discipline.¹⁵² This was exacerbated by the poor standard of volunteers obtained from ITCs to maintain the Battalion's establishment. Rock referred specifically to this in his 7 July 1941 paper on raising additional parachute battalions, in which he claimed that up to twenty-five per cent of such volunteers were subsequently lost for either refusing to jump or involvement in crime.¹⁵³

However, these views failed to take into account changes in 11 SAS Battalion's complexion wrought by its new commander, Lieutenant-Colonel E. E. "Eric" Down, who took command from Lieutenant-Colonel Jackson in June 1941. This command change-over was less than popular with at least some elements within the battalion, and Down was greeted with boos, catcalls and foot stamping.¹⁵⁴ Down allegedly laughed at the reaction he elicited when he informed his new command that their days of "ballet dancing" were over, and presumably did the same when he learned that he had been christened "Dracula" because of his that his uncompromising attitude.¹⁵⁵ This is well illustrated by one of the original Commando volunteers, Reg Curtis. On one occasion, a Whitley forced landed due to mechanical failure at Tatton Park, and the parachutists aboard were rushed back to Ringway for another jump to prevent them losing confidence. When the second jump was carried out without mishap, one of the men involved remarked to Curtis "I wonder if that first run was a ploy of Dracula, to see how we would react in an emergency?"¹⁵⁶

Whilst reprehensible from a disciplinary standpoint, the troops' initial reaction was understandable, for Down's arrival heralded a radical shift in the nature of 11 SAS battalion. The Army had been expressing dissatisfaction with the Commando system for troops undergoing parachute training at Ringway since August 1940,¹⁵⁷ and Down was to oversee the withdrawal of the special privileges that Commando status conferred. Given that this involved loss of not only pay but also of the comparative freedom from the more tiresome aspects of military life, it is unsurprising that some members of 11 SAS Battalion were unhappy. The prospect was sweetened somewhat by the introduction of special parachute pay, which Down attempted to have paid at the same rate to officers and other ranks.¹⁵⁸ The key factor appears to have been Down's powers of persuasion and leadership, however, for the majority of 11 SAS Battalion elected to remain under the new regime.¹⁵⁹

Between June and September 1941 Down set about transforming 11 SAS Battalion from a loose-knit raiding force into a first rate conventional infantry battalion that merely utilised an unconventional method to reach the battlefield. The battalion moved to Bury for a period of intensive weapon training, then back to Knutsford for a mixture of long-distance route marches and night descents from the balloon at Tatton Park.¹⁶⁰ In all this, Down remained a harsh taskmaster, accepting only the highest standards, from his men and himself. Reg Curtis reflects the view from within the battalion:

“We all wondered how this chap [Down] was going to fare: we soon found out. For starters no one could find a good word for him: Dracula we called him; but I must say that anything we could do he could do better...I liked his enthusiastic way: he would have no quibble at the thought of joining us on a scheme, competing and setting the pace at the head of the column on a 100 mile route march.”¹⁶¹

It was through leadership like this that Down lost the nickname Dracula and gained the more affectionate label “Charlie Orange”, the phonetic code for CO, or commanding officer.¹⁶² Down’s hard driving paid off. Gale inspected 11 SAS Battalion in his capacity as prospective commander of 1st Parachute Brigade, with a mind to enacting the War Office recommendation to disband the unit. Gale was so impressed by the changes wrought by Down in the three months since taking command that he opted to keep the unit intact. Following consultation between Gale and the Commander in Chief Home Forces, General Sir Bernard Paget, 11 SAS Battalion was re-designated the 1st Parachute Battalion on 15 September 1941, the same day that formation of the 1st Parachute Brigade was formally authorised.¹⁶³ It is interesting to note that despite his leading role in shaping the brigade, Gale was not officially confirmed as its commander until 29 September 1941.¹⁶⁴

Gale was to be greatly assisted in his new post by the parallel establishment of Headquarters, 1st Airborne Division. The Chief of the Imperial General Staff, General Sir Alan Brooke, pushed through the choice of a divisional rather than a force title against the opinion of the War Office. The Headquarters was initially tasked to oversee airborne training and development, but Brooke, who was a dedicated airborne supporter, was clearly thinking ahead to a further expansion of the airborne force, and wanted the necessary command infrastructure set up in advance. This became clear in mid-January 1942, when Brooke informed Commander in Chief Home Forces that henceforth HQ 1st Airborne Division was to be considered an operational command, and was to be fully integrated into the command structure in order to avoid difficulties in the future.¹⁶⁵ The officer selected to lead the new organisation was Brigadier F. A. M. “Boy” Browning, whose connections as a Guards officer would prove valuable in navigating the new arm

through the maze of War Office bureaucracy. Browning was informed of his new post on 29 October 1941, and assumed his duties with the acting rank of Major-General and a small staff on 3 November 1941.¹⁶⁶ Thus for the first time the British airborne force had a commander tasked specifically to deal with administration and development rather than operational matters, and with sufficient authority to fight its corner in Whitehall. This meant that Gale was able to concentrate upon training 1st Parachute Brigade, without the distraction of having to fight for the necessary resources.

1st Parachute Brigade's 2nd and 3rd Parachute Battalions, under Lieutenant-Colonels E. C. W. Flavell and G. W. Lathbury respectively, began forming at Hardwick Hall from 15 September 1941, where an administrative headquarters had been set up as agreed at the War Office conference of 30 August 1941.¹⁶⁷ Formation was to be completed by 1 October,¹⁶⁸ which would allow a month for sorting and incorporating volunteers, and physically hardening them for the rigours of parachute training, which was scheduled to commence on 1 November 1941. This hiatus was also to allow Ringway to make the necessary preparations for increasing its training output, and to gather the necessary parachutes and other training equipment.¹⁶⁹ The memo circulated to all Home Forces Commands at the end of August 1941 had been quite explicit about the type of volunteer required,¹⁷⁰ but many of the men reporting to Hardwick were nonetheless far below the required standard. The 2nd Parachute Battalion's Adjutant, Captain John Frost:

“...was astonished to see the way in which commanding officers of units all over Britain had taken the opportunity of playing the old Army game of shunting off their naughty boys and misfits when the call had gone out for volunteers to parachute. Nearly half those who presented themselves at the gates of the parachute battalions during this period were unsuitable for one reason or another. Some of them had conduct sheets...six pages long. There were few good NCOs because commanding officers often would not let them go.”¹⁷¹

The body of the Army, it seems, considered one call for volunteers – that for Commandos in June 1940 - to be enough. The variable quality of the volunteers arriving at Hardwick resulted in the respective battalion staffs intercepting batches of volunteers further and further from the camp gates in order to cream off the most promising, until things got out of hand and a more equitable consensus was reached.¹⁷²

Despite these difficulties, however, the two new parachute battalions progressed well in their pre-parachute preparation. Lathbury and three of his company commanders visited Ringway to see what lay in store for them on 15 October 1941,¹⁷³ and the Airborne Forces Establishment issued 1st Parachute Brigade with a set of “Standing Orders: Aircraft Drill

Parachuting” on 24 October 1941.¹⁷⁴ An advance party from Hardwick Hall arrived at Ringway as scheduled on 1 November 1941, and a total of two hundred and fifty-five trainees, consisting of “C” Company of the 2nd Battalion and “A” Company from the 3rd Battalion, commenced parachute training the next day.¹⁷⁵ On 15 November Ringway informed RAF Army Co-operation Command that No. 1 Parachute Training Course was completed successfully at 1330 hours.¹⁷⁶ In the intervening fourteen days, No. 1 Course had completed five hundred and nineteen balloon jumps and 1254 aircraft jumps, some of them in front of Browning, who visited Ringway on 12 November 1941.¹⁷⁷ Two hundred and forty-five of the two hundred and fifty who started finished the course, a success rate that suggests the physical hardening at Hardwick was doing its job.¹⁷⁸

It took a further four increments to run all the volunteers from the 2nd and 3rd Parachute Battalions through the PTS basic parachuting course. The second, consisting of two hundred and seventy trainees, commenced on 18 November and concluded twelve days later.¹⁷⁹ The operational records make no reference to any losses from No. 2 Course, but its completion brought the PTS’s monthly drop total for November 1941 to 1,443 balloon and 2,887 aircraft descents.¹⁸⁰ Course No. 3 began training on 5 December 1941, the five-day delay being necessary for parachute drying.¹⁸¹ This course tested a new departure for the PTS, that of running three training “syndicates” simultaneously. Two of these consisted of the 3rd Battalion’s “C” Company, and “A” Company from the 1st Battalion, a total of two hundred and forty-six all ranks.¹⁸² The third syndicate was made up of twenty-four Polish trainees from the 1st Polish Independent Parachute Brigade, who had commenced training on 2 December.¹⁸³ It should be noted that Poles were undergoing training at the PTS throughout this period.

Completion of Course No. 3 brought the total of descents carried out by the PTS in the six weeks since 1 November 1941 to 5,239, in the process of which thirty-nine trainees had been injured to an extent sufficient to prevent them completing the course. This was a ratio of fifty injuries per 5,000 drops.¹⁸⁴ Some personnel from 1st Parachute Brigade also undertook other activities whilst at Ringway. Men from the 1st Parachute Battalion made a total of two hundred and sixteen night balloon jumps during December.¹⁸⁵ A party of fourteen NCOs and men drawn from the 2nd and 3rd Parachute Battalions began a parachute packing and maintenance course on 8 December, and others participated in trials to gather data on the incidence of airsickness amongst airborne troops, and its effect upon efficiency.¹⁸⁶ The three-syndicate model was carried over into Course No. 4, which commenced on 17 December 1941 with two hundred and nine trainees from the 2nd and 3rd Parachute Battalions. It concluded on 25 December 1941 and, along with the rest of the

AFE, was rewarded with a day off as a double celebration.¹⁸⁷ The final and much smaller Course No. 5 began on 30 December, with twenty-five trainees including two padres. This was another first for Ringway, which was marked dryly in the operational records as being the "...first time the Parachute Training Squadron has had the honour to be instrumental in teaching reverend gentlemen to descend from the clouds".¹⁸⁸

The completion of Course No. 5 arguably marked the point at which the 1st Parachute Brigade became an operational entity, with all its jumping personnel having completed the basic parachuting course and received their qualification wings. The monthly drop total for December 1941 was 1,523 balloon jumps and 2,606 aircraft jumps.¹⁸⁹ This meant that the PTS had conducted a total of 2,966 balloon descents and 5,493 aircraft jumps in the two month period since 1 November, the vast majority of them by personnel from 1st Parachute Brigade. This was by no means the end of the matter, however. Advanced parachute training for all three Parachute Battalions was scheduled to commence on 3 January 1942, and was to consist of two stick descents and a night balloon jump per man.¹⁹⁰ Large-scale night jump training was something of an unknown quantity, although in the event it proceeded relatively without mishap. No. 1 Advanced Course was completed on 10 January 1942, at which time Ringway reported only two injuries from a total of one hundred and ninety-six balloon descents in total darkness. There were no refusals, and whilst the experience was described as eery, Ringway recommended that henceforth such training be included in the standard training syllabus.¹⁹¹

That two entire battalions were able to complete basic parachute training in a period of eight weeks virtually without a hitch – there was a brief dispute over transportation between Hardwick Hall and Ringway in mid-December¹⁹² - is a tribute to the careful planning and preparations made at Ringway and Hardwick Hall. As a result, the British Army finally possessed something approaching the force of 5,000 parachutists that Churchill had called for almost exactly eighteen months previously.

Notes

¹ see for example *The Sheffield Telegraph*, 15 February 1941; reproduced in Margry, op cit.

² PRO AIR 39/4, doc. 71A, letter from CLE to ACC, dated 07/06/1941

³ *ibid.*, doc. 71B, paper from CLE "British Parachute Troops", dated 07/06/1941

⁴ this process is covered in more detail below

⁵ quoted from PRO AIR 39/4, doc. 71B, paper from CLE "British Parachute Troops", dated 07/06/1941

-
- ⁶ PRO AIR 29/512, CLE ORB, entry for 20/10/1941
- ⁷ PRO AIR 32/4, doc 4A, enquiry from Turkish govt. to WO, dated 03/06/1941; and doc. 7A, paper from CLE, "Details of Equipment Carried by Parachute Troops", dated 19/06/1941
- ⁸ PRO File WO 193/27, docs. 4A & 5A, teleprints from C in C Middle East to WO, dated 16/09/1940; and doc. 8A, teleprint from C in C India to C in C Middle East & WO, dated 04/10/1940
- ⁹ *ibid.*, doc. 12A, teleprint from WO to C in C Middle East, dated 11/10/1940
- ¹⁰ *ibid.*, doc 14A, teleprint from C in C Middle East to WO, dated 04/12/1940
- ¹¹ *ibid.*, doc 17A, teleprint from WO to C in C India, dated 29/01/1941
- ¹² Otway, *op cit.*, pp. 331-332
- ¹³ PRO AIR 2/7574, doc. 1A(2), letter from WO to AM DMC, dated 27/08/1941
- ¹⁴ for details of the convoluted evolution of this unit, see Otway, pp. 341-346
- ¹⁵ see Chapter One above
- ¹⁶ PRO CAB 120/262, doc. 37B, letter from Amery to PM, dated 06/10/1941. Wavell had been appointed C in C India in mid-1941; see Fraser (Shock Them), *op cit.*, pp. 160, 204
- ¹⁷ PRO CAB 120/262, doc. 37A, letter from PM to CoS, dated 06/10/1941
- ¹⁸ *ibid.*, doc. 38, letter from CoS to PM, dated 04/11/1941
- ¹⁹ *ibid.*, doc. 39, letter from Amery to PM, dated 06/11/1941
- ²⁰ *ibid.*, doc. 40, letter from Amery to PM, dated 11/11/1941
- ²¹ *ibid.*, doc. 41, letter from PM to CoS, dated 13/11/1941. Churchill also forwarded Amery's letter of 06/11/1941 on the day it was received, as shown by his pencil footnote
- ²² *ibid.*, doc. 42, letter from CAS to PM, dated 19/11/1941
- ²³ PRO AIR 29/512, CLE ORB, several entries commencing 01/11/1941
- ²⁴ PRO CAB 120/262, doc. 43B, cipher telegram from C in C Middle East to WO, dated 20/01/1941
- ²⁵ for details, see Chapter One above
- ²⁶ for details see David Warner, "Auchinleck", in John Keegan (Ed), *Churchill's Generals*, pp. 130-147
- ²⁷ Kabrit suffered from high winds, frequent sandstorms and extremely high temperatures, which were inappropriate for parachute training; see Otway, pp. 107-109
- ²⁸ *ibid.*, pp. 61-62, 74-75
- ²⁹ interestingly, Auchinleck also followed his predecessor Wavell to high command in India in June 1943; see Fraser (Shock Them), pp. 160, 232, 302
- ³⁰ PRO CAB 120/262, doc. 44, letter from Amery, S of S for India to PM, dated 19/01/1942
- ³¹ *ibid.*, doc. 47, telegram from CinC ME to WO South India, dated 31/03/1942
- ³² *ibid.*, doc. 46, telegram from Amery to Indian Government, dated 05/04/1942
- ³³ *ibid.*, doc. 44, letter from Amery, S of S for India to PM, dated 19/01/1942
- ³⁴ For full details of this process, see Chapter Six above

-
- ³⁵ PRO WO 193/27, doc. 10A, note to WO DMO & P, dated 04/10/1940
- ³⁶ PRO AIR 2/7338, doc. 45A, letter from WO to AM Plans, dated 11/11/1940
- ³⁷ PRO AIR 32/2, doc. 14, paper "Airborne Troops – Policy For", from WO to AM, dated 10/01/1941
- ³⁸ *ibid.*, doc. 15, paper from CLE to WO, dated 15/01/1941
- ³⁹ PRO AIR 2/7338, doc. 89A, "Minutes for Meeting at the Air Ministry on 19 February 1941", dated 25/02/1941; and PRO AIR 2/7470, doc. 18B, "Paper on Airborne Policy", dated 24/03/1941
- ⁴⁰ *ibid.*, doc. 8A, paper "Training and Organisation of Air-Landed Troops" from Rock CLE, n.d., c.08/1940
- ⁴¹ PRO AIR 2/7574, doc. 5, letter from Nye WO to Freeman AM, dated 04/07/1941
- ⁴² PRO WO 32/9778, doc. 25A, memo from VCIGS to CIGS, dated 04/07/1941
- ⁴³ *ibid.*, doc. 25A, pencilled addendum from CIGS, dated 05/07/1941
- ⁴⁴ *ibid.*, doc. 24A, covering letter from Rock CLE to WO SD4, dated 07/07/1941; and doc. 24B, paper "Formation of Further Parachute Battalions", n.d., c.07/07/1941
- ⁴⁵ *ibid.*, doc. 26A, "Agenda for WO Meeting on 23 July 1941, to Discuss Raising 2 Parachute Battalions", dated 17/07/1941
- ⁴⁶ *ibid.*, doc. 27A, "Notes of Meeting at WO on 23 July 1941 to Consider Plan for Raising Additional Parachute Battalions", dated 26/07/1941
- ⁴⁷ PRO AIR 2/7574, doc. 1A(2), letter from WO to AM DMC, dated 27/08/1941
- ⁴⁸ PRO WO 32/9778, doc. 33A, letter from Adam WO to CinC HoFor, dated 18/08/1941
- ⁴⁹ *ibid.*, doc. 34A, "Minutes of Meeting Held at Hobart House on August 26 1941 at 1500 to discuss Formation of Two New Air Battalions", dated 30/08/1941
- ⁵⁰ PRO WO 32/4723, doc. 1B, memo, "Volunteers for Special Service", from WO DRO to Northern and Southern Commands HoFor, dated 09/06/1940; doc. 14A, memo from WO DRO to all HoFor Commands, dated 17/06/1940; and doc. 15A, telegram from WO DRO to all HoFor Commands, also dated 17/06/1940
- ⁵¹ PRO WO 32/9778, doc. 35A, memo "Urgent Memo Re; Formation of 2 Additional Airborne Battalions", from WO AAG to all HoFor Commands, dated 28/08/1941
- ⁵² PRO AIR 39/4, doc. 102B, paper "British Airborne Force: Policy", from AM to WO, dated 08/08/1941
- ⁵³ PRO AIR 2/7574, doc. 3C, "Minutes of Air Ministry Conference to Discuss the Provision of Flying Personnel for Airborne Forces", dated 22/08/1941
- ⁵⁴ for the meeting agenda, see PRO AIR 39/7, doc. 106B, "Agenda for Air Ministry Meeting on 9 September 1941", n.d., c.09/09/1941
- ⁵⁵ PRO AIR 2/7574, doc. 10C, "Minutes of Meeting at Army Co-operation Command to Discuss Measures to Increase CLE Output to 100 Parachutists Per Week", dated 09/09/1941
- ⁵⁶ PRO AIR 39/7, doc. 108C, letter "Expanding Parachute Training Scheme", from CLE to 70 Group & ACC, dated 15/09/1941
- ⁵⁷ PRO AIR 2/7574, doc. 19B, letter from WO MT1 to OC, 1 Para Brigade, dated 29/09/1941
- ⁵⁸ *ibid.*, doc. 19A, covering letter for doc. 19B, from ACC to AM DMC, dated 04/10/1941
- ⁵⁹ *ibid.*, doc. 18A, letter from WO SD4 to AM DMC, dated 03/10/1941; and attached doc. 18B, letter from CinC HoFor to GOC Northern Command, dated 31/08/1941; and doc. 18C, "Appendix A", TOE chart for parachute brigade, n.d., c. 31/08/1941. See also Otway, p. 34

-
- ⁶⁰ PRO AIR 32/3, doc. 30A, letter and appendix from CinC HoFor to All HoFor Commands, dated 10/10/1941
- ⁶¹ PRO AIR 32/4, doc. 10C, letter from Marecki Polish GS to Gubbins WO, dated 09/06/1941
- ⁶² *ibid.*, doc. 10B, letter from Gubbins WO to Marecki Polish GS, dated 20/06/1941
- ⁶³ *ibid.*, doc. 10A, letter from Gubbins WO to Rock CLE, dated 20/06/1941
- ⁶⁴ *ibid.*, doc. 11A, letter from Rock CLE to Gubbins WO, dated 03/07/1941
- ⁶⁵ PRO AIR 32/2, doc. 1A, paper "Training and Organisation of Air-Landing Troops", from Rock CLE, n.d., c.08/1940
- ⁶⁶ *ibid.*, doc. 10A, paper "Brief Appreciation of the Envisaged Functions of an Airborne Force", from CLE, dated 31/10/1940
- ⁶⁷ PRO AIR 2/7470, doc. 4B, draft memo on airborne employment, from Nye WO to Goddard AM, dated 19/01/1941
- ⁶⁸ quoted from PRO AIR 32/4, doc. 10D, paper "Provisional Instructions for Parachute Units", from Polish GS, n.d., c.06/1941
- ⁶⁹ the paragraph regarding POWs merely drew attention to the possible danger that large numbers of such could pose to a parachute force. See *ibid.*, doc. 10D, paragraph 32 "Prisoners", in paper "Provisional Instructions for Parachute Units", from Polish GS, n.d., c.06/1941
- ⁷⁰ *ibid.*, doc. 10D, paragraph 23 "Re-assembly of Landing Parachute Unit"; and paragraph 24, "Daytime Descents Protected by Fighting Aircraft", in paper "Provisional Instructions for Parachute Units", from Polish GS, n.d., c.06/1941
- ⁷¹ *ibid.*, doc. 11B, paper "Comments on Colonel Marecki's Paper", from Rock CLE to Gubbins WO & Polish GS, n.d., c.03/07/1941
- ⁷² TOT is an artillery term originating from the First World War, which refers to a barrage in which the opening salvo of shells is timed to land on the target simultaneously, irrespective of the relative distance of individual batteries from the target
- ⁷³ PRO AIR 32/4, doc. 11B, paper "Comments on Colonel Marecki's Paper", from Rock CLE to Gubbins WO & Polish GS, n.d., c.03/07/1941
- ⁷⁴ *ibid.*, doc. 12A, letter from Gubbins WO to Rock CLE, dated 06/07/1941
- ⁷⁵ *ibid.*, doc. 13A, cover slip from Rock CLE to Gubbins WO, dated 10/07/1941; and doc. 13B, paper "Notes on the Use of Parachute Troops (Paratroops)" from Rock CLE, n.d., c.10/07/1941
- ⁷⁶ *ibid.*, doc. 13B, paper "Notes on the Use of Parachute Troops (Paratroops)" from Rock CLE, n.d., c.10/07/1941
- ⁷⁷ PRO AIR 29/512, CLE ORB, entry for 01/07/1941
- ⁷⁸ PRO AIR 32/4, doc. 14A, cover slip from CLE, dated 21/06/1941; and doc. 14B, paper "Army Co-operation Command and Parachute Troops", n.d., c.21/06/1941
- ⁷⁹ *ibid.*, doc. 16A, paper "Seizing a Bridgehead for an Armoured Division", from CLE, n.d., c.06/1941
- ⁸⁰ *ibid.*, doc. 17A, paper "Precis: Airborne Forces Theory", from CLE, n.d., c.06/1941
- ⁸¹ PRO AIR 29/512, CLE ORB, entry for 14/05/1941
- ⁸² these special forces soldiers, at least some of whom later served with the Polish 1st Independent Parachute Brigade, are covered in more detail below. It is unclear precisely when they began to arrive at Ringway for parachute training, but the first reference to Poles in the operational records appears in September 1940,

which is also when the new Polish covert action force commenced training; see *ibid.*, CLE ORB, entry for 28/10/1940; Cholewczynski, *op cit.*, p. 46; and Garlinski, *op cit.*, p. 60

⁸³ PRO AIR 29/512, CLE ORB, entry for 28/10/1940

⁸⁴ personal comment during interview with Colonel Jan Lorys, *op cit.*, 16/06/1998

⁸⁵ PISM File AV 20/3, doc. 105, letter (in Polish) from Gorecki on Ringway headed notepaper, dated 15/07/1941

⁸⁶ *ibid.*, doc. 201, covering letter from Harvey AFE to Marecki Polish GS, dated 26/11/1941; and attached conference report "Re: Conference with Polish Army HQ Staff on 21 and 22 November 1941", n.d., c.23/11/1941

⁸⁷ PRO AIR 29/512, CLE ORB, entry for 14/04/1941, and numerous entries thereafter

⁸⁸ PISM, AV 20/4, doc. 151, letter from Newnham PTS to Sosabowski OC 1st Polish Independent Parachute Brigade, dated 01/06/1942

⁸⁹ Cholewczynski, pp. 46-48

⁹⁰ Newnham, *op cit.*, p. 54

⁹¹ *ibid.*, p. 264

⁹² PRO AIR 29/512, CLE ORB, entry for 10/04/1941

⁹³ PRO AIR 39/7, doc. 12A, note from AOC to CLE, "Re: Windsor Demonstration on 25/05/1941", dated 27/05/1941; and doc. 25A, memo from CLE to 70 Group, dated 06/06/1941

⁹⁴ Garlinski, p. 39

⁹⁵ Cholewczynski, p. 50

⁹⁶ Cholewczynski refers to the "British Commando School", but primary documentation connected to Polish special training clearly refers to the STC. Commando training was carried out in the vicinity, and it is easy to see how such confusion could arise. The Commando Training Center was established a few miles from Lochailort, at Achnacarry, in April 1942; see Cholewczynski, p. 46; Garlinski, p. 60; and Stanislaw Sosabowski, *Freely I Served*, pp. 93-94. For details of the establishment of the Commando Training Centre, see Ladd, *op cit.*, p. 168

⁹⁷ SOE was running its own small-scale parachute training operation by January 1942, utilising CLE air assets. According to M.R.D. Foot, one such SOE school was located "...in a requisitioned merchant's house at Altrincham near Manchester". This is probably the SOE accommodation referred to by Gubbins when expressing concern over the possible waste of resources a relocation of the PTS away from Ringway would entail. It is therefore likely that at least some *Cichociemni* received their parachute training from SOE; see PRO AIR 39/7, doc. 231A, letter from Gubbins WO attached to communication from ACC to 70 Group, dated 11/01/1942. I am indebted to Professor Foot for providing details of the SOE installation at Altrincham, via private communication dated 30/11/1999

⁹⁸ Sosabowski, p. 95; and PRO AIR 29/512, CLE ORB, entry for 28/10/1940

⁹⁹ PRO AIR 29/512, CLE ORB, entry for 14/03/1941

¹⁰⁰ *ibid.*, CLE ORB, various entries between 14/04/1941 and 12/08/1941

¹⁰¹ for a participant account, see Sosabowski, pp. 90-92

¹⁰² Cholewczynski, pp. 44-46; and Sosabowski, pp. 93-95

¹⁰³ see for example Sosabowski, pp. 96-97; Cholewczynski, p. 46; and Dover, *op cit.*, p. 143

¹⁰⁴ Krzysztof Barbarki, "1st Polish Independent Parachute Brigade, 1941-47 (1)" *Military Illustrated Past and Present* No. 12, April/May 1988, p. 24

¹⁰⁵ Sosabowski, p. 97

¹⁰⁶ PRO AIR 29/512, CLE ORB, entry for 21/07/1941

¹⁰⁷ PRO AIR 39/7, doc. 87A, letter "Polish Parachute Training School", from CLE to 70 Group, dated 29/08/1941; and doc. 91A, letter from 70 Group to CLE, dated 02/09/1941

¹⁰⁸ *ibid.*, doc. 81A, letter from ACC to 70 Group, dated 03/08/1941

¹⁰⁹ this improvised apparatus was mentioned by Colonel Jan Lorys during the PISM interview in June 1998; see also Cholewczynski, p. 49

¹¹⁰ PRO AIR 39/7, doc. 78A, report "Parachute Training School – Polish", from CLE to 70 Group & ACC, dated 27/07/1941

¹¹¹ Cholewczynski cites the one hundred feet figure, but a British report from July 1941 quotes a figure of sixty feet. Colonel Jan Lorys, who trained on the tower, commented upon its similarity to pre-war Polish civilian types during the PISM interview in June 1998. See Cholewczynski, p. 49; and PRO AIR 39/7, doc. 78A, report "Parachute Training School – Polish", from CLE to 70 Group & ACC, dated 27/07/1941

¹¹² PISM AV 20/3, doc. 13, letter from Polish GS to WO, dated 24/01/1941

¹¹³ Sosabowski, p. 100; and Cholewczynski, p. 49

¹¹⁴ PRO AIR 29/512, PTS ORB, entry for 01/01/1942

¹¹⁵ PRO AIR 39/7, doc. 78A, report "Parachute Training School – Polish", from CLE to 70 Group & ACC, dated 27/07/1941

¹¹⁶ for details of the formation of 6th Airborne Division, see Otway, *op cit.*, pp. 94-95

¹¹⁷ Harclerode (Go To It), *op cit.*, pp. 27-28

¹¹⁸ Williams suggested a 350-foot tower, costing an estimated £30,000. The estimate came from a British engineering firm, and appears to have prompted its rejection by the Air Ministry. The difference in cost between Williams' projection and the Polish example was presumably due to the significant difference in height; see Ward, *op cit.*, p. 149

¹¹⁹ The US Parachute Test Platoon first used the tower in August 1940, utilising two civilian towers constructed at Hightown, New Jersey, for the 1939 World Fair. Unlike the Polish and British examples, the American towers did not incorporate a platform, but hoisted the trainee up from the ground. Similar towers were built later at the US Army Airborne Training School at Fort Benning, Georgia; see Devlin, *op cit.*, pp. 56-58

¹²⁰ PRO AIR 29/512, CLE ORB, entries for 02/04/1941 & 01/07/1941

¹²¹ for details of the obstacles, see PRO AIR 39/7, doc. 78A, report "Parachute Training School – Polish", from CLE to 70 Group & ACC, dated 27/07/1941

¹²² Cholewczynski, p. 49

¹²³ PRO AIR 39/7, doc. 78A, report "Parachute Training School – Polish", from CLE to 70 Group & ACC, dated 27/07/1941

¹²⁴ PRO WO 32/9778, doc. 27A, "Notes of Meeting at WO on 23 July 1941 to Consider Plan for Raising Additional Parachute Battalions", dated 26/07/1941

¹²⁵ *ibid.*, doc. 26A, "Agenda for WO Meeting 23 July 1941 to Discuss Raising Two Parachute Battalions", dated 17/07/1941

¹²⁶ the four locations cited in the report were Largo House, Ludlin Links, Elie and Fort William. The first and last of these are on the eastern and western coasts of Scotland respectively; see PRO AIR 39/7, doc. 78A, report "Parachute Training School – Polish", from CLE to 70 Group & ACC, dated 27/07/1941

-
- ¹²⁷ the Major's name is illegible on the document; see PISM AV 20/3, doc. 150, letter from Major WO to Sosabowski c/o Polish HQ SW1, dated 20/08/1941
- ¹²⁸ PRO WO 32/9778, doc. 24A, covering letter from Rock CLE to WO SD4, dated 07/07/1941; and doc. 24B, paper "Formation of Further Parachute Battalions", n.d., c.07/07/1941
- ¹²⁹ Sosabowski, pp. 96-97
- ¹³⁰ *ibid.*, p. 96
- ¹³¹ Cholewczynski, p. 53
- ¹³² PISM AV 20/3, doc. 13, letter from Polish GS to WO, dated 24/01/1941; and Sosabowski, p. 97
- ¹³³ PRO AIR 29/512, CLE ORB, entry for 14/03/1941
- ¹³⁴ see Garlinski
- ¹³⁵ the letter unfortunately does not provide details of the supposed infractions; see PISM AV 20/4, doc. 5, letter from Sosabowski to Mackworth Praed, OC STC, dated 02/01/1941
- ¹³⁶ *ibid.*, doc. 28, letter from O'Brien STC to Sosabowski, n.d., c.03/1941
- ¹³⁷ *ibid.*, doc. 83, Polish translation attached to copy of British Army Act, dated 25/02/1941; and doc. 84, letter from WO to Polish Independent [Parachute Brigade], dated 25/02/1942
- ¹³⁸ for details see Otway, p. 39
- ¹³⁹ Sosabowski, pp. 105-106; and Cholewczynski, pp. 50-51
- ¹⁴⁰ Cholewczynski, p. 53
- ¹⁴¹ Dover, pp. 144-145
- ¹⁴² Middlebrook, *op cit.*, p. 42
- ¹⁴³ *ibid.*, pp. 6-9
- ¹⁴⁴ *ibid.*, see Middlebrook, pp. 414-416
- ¹⁴⁵ personal comment cited in *ibid.*, p. 416
- ¹⁴⁶ Richard Lamb, *Montgomery in Europe*, p. 251; cited in Middlebrook, p. 447
- ¹⁴⁷ Middlebrook, pp. 447-448
- ¹⁴⁸ *ibid.*, p. 448
- ¹⁴⁹ the 1st Polish Independent does not appear in the 1st Airborne Division order of battle prior to Arnhem, and there is no mention of Poles in the battle narrative that follows; see *By Air To Battle*, pp. 98-143
- ¹⁵⁰ Otway, pp. 147, 261, 271-283
- ¹⁵¹ PRO WO 32/9778, doc. 25B, telegram from WO SD4 to 11 Battalion [sic], dated 15/07/1941
- ¹⁵² see for example PRO AIR 2/7338, doc. 8A, paper "Training and Organisation of Air Landing Troops" from Rock at the CLS, n.d., c.08/1940
- ¹⁵³ PRO WO 32/9778, doc. 24B, paper "Formation of Further Parachute Battalions", n.d., c. 07/07/1941
- ¹⁵⁴ Thompson, p. 22. Incidentally, this was not the last occasion that a unit christened SAS took less than kindly to a new commander. In 1953 a group of drunken SAS senior NCOs blew off the back wall of the officer's mess in Malaya as a greeting for Lieutenant-Colonel Oliver Brooke; see Geraghty, *op cit.*, p. 31

-
- ¹⁵⁵ Dover, p. 32
- ¹⁵⁶ quoted from Curtis, *op cit.*, p. 71
- ¹⁵⁷ PRO AIR 2/7338, doc. 8A, paper "Training and Organisation of Air Landing Troops" from Rock at the CLS, n.d., c.08/1940
- ¹⁵⁸ PRO WO 32/9778, doc. 34A, "Minutes of Meeting Held at Hobart House on August 26 1941 at 1500 to discuss Formation of Two New Air Battalions", paragraph headed "Parachute Pay", dated 30/08/1941
- ¹⁵⁹ according to Thompson, eighty-five per cent of the existing battalion chose to remain; see Thompson, p. 22
- ¹⁶⁰ Saunders, *op cit.*, pp. 41-42
- ¹⁶¹ Curtis, p. 83
- ¹⁶² Saunders, p. 42
- ¹⁶³ Otway, p. 34 ; and Dover, pp. 26-27
- ¹⁶⁴ PRO AIR 2/7574, doc. 19B, letter from WO MT 1 to CO 1 Para Brigade, dated 29/09/1941; according to Dover, Gale was asked if he wanted the command on 15 September, an unusual step in itself. Gale was at that time a Lieutenant-Colonel commanding a battalion of the Leicester Regiment, but the minutes of the 9 September conference clearly list him as "Brigadier i/c 1 Para Brigade"; see Dover, pp. 26-27; and PRO AIR 39/7, doc. 107B
- ¹⁶⁵ PRO WO 32/9778, doc. 59A, letter from CIGS to C in C HoFor, dated 14/01/1942
- ¹⁶⁶ Otway, pp. 38-39
- ¹⁶⁷ PRO WO 32/9778, doc. 34A, "Minutes of Meeting Held at Hobart House on August 26 1941 at 1500 to discuss Formation of Two New Air Battalions", paragraph headed "Parachute Pay", dated 30/08/1941
- ¹⁶⁸ PRO AIR 39/7 doc. 88B Appendix "A", letter "Formation of Parachute Brigade", from SD4 WO to DMC AM, n.d., c.27/08/1941
- ¹⁶⁹ for details see Chapter Seven above
- ¹⁷⁰ PRO WO 32/9778, doc. 35A, memo "Urgent Memo Re; Formation of 2 Additional Airborne Battalions", from WO AAG to all HoFor Commands, dated 28/08/1941
- ¹⁷¹ quoted from Thompson, p. 26
- ¹⁷² *ibid.*, pp. 26-27
- ¹⁷³ PRO AIR 29/512, CLE ORB, entry for 15/10/1941
- ¹⁷⁴ PRO AIR 39/7, doc. 176A, covering letter from AFE to HQ 1 Para brigade, re: attached "Standing Orders – Aircraft Drill parachuting", dated 24/10/1941
- ¹⁷⁵ PRO AIR 29/512, CLE ORB, entries for 01/11/1941 and 02/11/1941
- ¹⁷⁶ PRO AIR 39/7, doc. 197A, signal from AFE to RAF ACC, dated 15/11/1941
- ¹⁷⁷ PRO AIR 29/512, CLE ORB, entry for 12/11/1941
- ¹⁷⁸ *ibid.*, CLE ORB, entry for 15/11/1941
- ¹⁷⁹ *ibid.*, CLE ORB, entry for 18/11/1941; and AIR 39/7, doc. 203, signal from AFE to RAF ACC, dated 30/11/1941
- ¹⁸⁰ *ibid.*, CLE ORB, entry for 30/11/1941

-
- ¹⁸¹ PRO AIR 39/7, doc. 203, signal from AFE to RAF ACC, dated 30/11/1941
- ¹⁸² PRO AIR 29/512, CLE ORB, entry for 05/12/1941
- ¹⁸³ *ibid.*, CLE ORB, entry for 02/12/1941
- ¹⁸⁴ *ibid.*, CLE ORB, table at end of entry for 13/12/1941
- ¹⁸⁵ *ibid.*, CLE ORB, entry for 13/12/1941
- ¹⁸⁶ *ibid.*, CLE ORB, entries for 08/12/1941 & 11/12/1941
- ¹⁸⁷ *ibid.*, CLE ORB, entries for 17/12/1941 & 25/12/1941
- ¹⁸⁸ *ibid.*, CLE ORB, entry for 30/12/1941
- ¹⁸⁹ *ibid.*, CLE ORB, entry for 31/12/1941
- ¹⁹⁰ *ibid.*, CLE ORB, entry for 31/12/1941
- ¹⁹¹ *ibid.*, doc. 232A, letter from AFE to RAF ACC "Paratroop Training: Night Dropping", dated 10/01/1942
- ¹⁹² PRO AIR 39/7, doc. 209A, letter from AFE to RAF ACC, n.d.; and doc. 219A, letter from RAF ACC to AFE, dated 16/12/1941

CHAPTER NINE

Conclusion

The appearance of the operational parachute force Churchill had ordered in June 1940 was but the first in a series of British airborne milestones. This concluding chapter will therefore begin by recounting that development to 1945, followed by a brief survey of parallel airborne development elsewhere. This will set the scene for a general discussion of the value of airborne forces, before refocusing on the British example.

I. British Airborne Development, January 1942 – May 1945

Events progressed rapidly after 1st Parachute Brigade attained operational status. The Army Air Corps was created as an umbrella organisation for parachute and glider troops on 21 December 1941. What was to become the 1st Airlanding Brigade was concentrated in the Newbury-Basingstoke area by December 1941, where it liaised with the AFE and trained with mock-up gliders whilst awaiting the appearance of the real thing. A dedicated Glider Pilot Regiment was raised to fly these machines, and began training at the beginning of January 1942.¹ Through 1942 these units were augmented by a host of divisional troops. These included a postal unit, a provost company, an independent pathfinder company, a reconnaissance squadron and a parachute field ambulance, amongst others.² April 1942 saw Hardwick Hall transformed into the Airborne Forces Depot, and the 2nd Parachute Brigade established under a newly promoted Lieutenant-Colonel Down on 17 July 1942. This consisted of the 4th Parachute Battalion transferred from 1st Parachute Brigade, augmented by the 5th (Scottish) and 6th (Royal Welch) Parachute Battalion, formerly the 7th Battalion, The Cameron Highlanders and 10th Battalion, The Royal Welch Fusiliers respectively.³

On 1 August 1942 all the existing parachute battalions became part of the new Parachute Regiment at the behest of 1st Airborne Division's commander, Major-General F. A. M. "Boy" Browning. The maroon beret then became official head-dress for all Army Air Corps personnel. This was not popular with many paratroopers from infantry regiments that already possessed distinctive head-dress,⁴ but was introduced to promote an airborne *esprit de corps*. Legend has it that the maroon beret was selected on the preference of the orderly demonstrating green, blue and maroon examples for Browning and the CIGS General Sir Alan Brooke.⁵ The maroon beret has arguably exceeded Browning's expectations, becoming the most enduring symbol of Airborne Forces not only in Britain but also elsewhere.⁶ At the same time, the Airborne flash of Bellerophon astride the

winged horse Pegasus and the Airborne arm of service colours (Cambridge blue and claret) were adopted.⁷

1st Parachute Brigade made its collective operational debut (a company from the 2nd Parachute Battalion had participated in the raid on the German radar station at Bruneval in February 1942),⁸ following a move to North Africa in November 1942. During this period the paratroops acquired their nickname of "Red Devils", allegedly from their German opponents. 1st Airborne Division concentrated at Mascara in May 1943, under command of Major-General G. F. Hopkinson. Hopkinson had succeeded Browning as divisional commander when the latter was elevated to Major-General Airborne Forces on 5 May 1943.⁹ 1st Airlanding Brigade and 1st Parachute Brigade took part in separate operations in Sicily on the nights of 9-10 July and 13-14 July respectively. By chance, some of the drop zone selected by 1st Parachute Brigade had also been chosen by elements of the German 1st Parachute Division, who dropped in slightly before the British, prompting the first clash between airborne forces on landing.¹⁰ 2nd Parachute Brigade was slated for an operation on 10-11 July, but this was cancelled because ground forces secured the objective. 1st Airborne Division was deployed in the ground role for the occupation of southern Italy, landing at Taranto on 11 September 1943. The Division then advanced to seize Foggia, during which operation Major-General Hopkinson was killed. 1st Airborne Division left Italy by ship for the UK in November 1943.¹¹

Things had been moving apace in the UK in 1st Airborne's absence. On 23 April 1943 the War Office authorised the establishment of a second airborne division. Christened 6th Airborne Division as a disinformation measure, the new division was built around an initial cadre of 3rd Parachute Brigade, 3rd Parachute Squadron, RE and 224th Parachute Field Ambulance. These were all re-assigned 1st Airborne Division units, which had remained in the UK when the latter moved to North Africa.¹² Command of the new division was allotted to newly promoted Major-General Richard Gale on 2 May 1943. Gale, it should be remembered, had originally commanded 1st Parachute Brigade, but had been sidelined for command of 1st Airborne Division in favour of Browning, largely for political reasons. Under his command 6th Airborne Division successfully secured the left flank of the Normandy invasion beaches in June 1944, including the epic operation to destroy the German gun battery at Merville by Major Terence Otway's 9th Parachute Battalion.¹³ The Division also participated in the Rhine crossings in March 1945 and the subsequent ground advance across north Germany.¹⁴ After standing to for several aborted operations in the summer of 1944, 1st Airborne Division was virtually destroyed in the ill-conceived

operation to seize the bridges at Arnhem that September. It ended the war by supervising the surrender of German personnel in Norway

Thus, in the period between Dunkirk and VE Day the British airborne force expanded from a handful of ill-equipped parachute raiders to a force well in excess of two fully equipped divisions in strength.¹⁵ Before examining the matter of whether or not this was a worthwhile, or indeed justifiable, expansion, it will first be necessary to sketch in airborne development elsewhere, in order to put the British example in its wider context.

II. Airborne Development Outside the UK, January 1942 – May 1945

As detailed in Chapter One, despite being the first to adopt a man-carrying parachute and form a dedicated parachute unit, the Italians let their lead slip at the end of the 1920s. Italian parachute units remained in being, and were first used operationally in a small operation to seize the Greek island of Cephalonia on 30 April 1941. In the spring of 1942 the Italian parachute force was expanded to divisional size. Christened the *Folgore*, the division had two 2,500 strong parachute regiments. A joint airborne invasion of Malta with 7th *Flieger* Division in August March 1942 was cancelled, and thereafter Italian parachute troops were employed exclusively in the ground role.¹⁶

The Soviets, who had held the airborne lead through the 1930s, made more extensive use of their huge airborne force after the German invasion in June 1941. By the time the Germans invaded the Soviet Union in June 1941, the Soviet airborne force was divided into five corps, one independent brigade and a host of smaller units, complete with an independent administration answerable directly to the Soviet Ministry of Defence.¹⁷ Whilst the force lacked a good deal of equipment, including suitably configured parachuting aircraft and radios, the fact that the Soviets had been able to create such a capability from scratch in a decade was a highly creditable achievement in itself. Soviet airborne doctrine was also updated, in Article 28 of the 1941 Field Service Regulations.¹⁸

It was under this brief that the Soviet airborne arm went to war in June 1941. Circumstances after 22 June 1941 frequently obliged Soviet airborne troops to be deployed in the infantry role, although several parachute operations were carried out against the German invaders. On 14 July 1941, a parachute company raided a German vehicle concentration near Gorki, the first of many diversionary operations, some of which were carried out in conjunction with partisan groups. Large multi-brigade parachute operations were also carried out in support of ground operations. These included drops to shield

Moscow in December 1941-January 1942, and operations in support of ground offensives in the regions of Viaz'ma (January-February 1942), Demiansk (February-April 1942), and in the crossing of the Dnieper in September 1943. Although little known in the West, these were comparable in size and scope with Western airborne operations.

The German airborne force remained idle for almost a year after their large-scale employment in the Low Countries in May 1940. Some planning for the projected invasion of Britain was undertaken, including a scheme to seize Brighton and high ground north of Dover to protect the flanks of the proposed German beachhead, and another for a series of *coup-de-main* attacks around Dover.¹⁹ These were hamstrung by several factors, not least the lack of high-level commitment to Operation *Seelöwe* (Sealion), as the invasion was code-named, and the absence of the airborne force's commander; Student had been wounded by friendly fire in the closing stages of the fight for Rotterdam.²⁰ This hiatus was fortunate. The operations in the Low Countries had used up a large proportion of existing stocks of parachutes and gliders, around one in four transport aircraft were unserviceable, and there was a shortage of trained *Fallschirmjäger* to replace casualties.²¹

Student returned to duty in January 1941, by which time German attention was refocusing on the Mediterranean, as part of the deception measures for the attack on the Soviet Union. Student took advantage of this to advance the airborne cause, and succeeded in persuading Hitler to authorise an airborne assault on Crete during a personal interview on 21 April 1941; Hitler confirmed his decision in Directive No. 28 on 25 April 1941.²² He also ordered a detachment of German paratroops to capture the single road bridge over the Corinth Canal, which linked the Peloponnese to the Greek mainland, in order to cut off retreating Allied forces. The attack, codenamed Hannibal, was launched on 26 April 1941. The bridge was captured intact, but not before most of the retreating Allied troops had escaped, and the bridge was destroyed shortly after when a near miss detonated demolition charges still fixed to the structure. In any event, Hannibal forfeited strategic surprise for the attack on Crete by revealing the presence of German airborne troops in southern Europe.²³

The assault on Crete was launched on 20 May 1941. *Luftwaffe* air attacks failed to suppress British defences, and several German units in the first lift were virtually annihilated on landing, and many of the survivors were widely scattered. The second lift was supposed to go in on the afternoon of 20 May, but refuelling delays wrecked the schedule and the problem was compounded by communication failures at several levels. By dusk, none of the initial German objectives had been fully achieved. The most critical

of these was the failure to seize the airfield at Maleme, to facilitate the landing of reinforcements.

Luckily for Student's men, the poor communications of the defenders, in conjunction with the scattered nature of the German lodgements, prevented a co-ordinated counter attack. Maleme airfield and the surrounding area were finally secured on the afternoon of 21 May 1941. Thereafter the balance tipped increasingly toward the invaders, leading to a British evacuation that ceased on 30 May, although mopping up continued for a considerable period thereafter.²⁴ The battle cost the Germans 6,698 casualties, just over half of which were fatalities. 1,653 of the dead were *Fallschirmjäger*, which represented around one in four of the airborne force deployed. In addition, almost two hundred transport aircraft were destroyed, and high proportions of their crews were also killed.²⁵

According to Otway, Student did not consider this price to be excessive,²⁶ but Hitler was shocked at the scale of the casualties and informed Student on 19 July 1941 that the "...parachute weapon depends on surprise – the surprise factor has now gone".²⁷ Whether this was justified is discussed more fully below, but Hitler's opinion meant that Crete was the last major German airborne operation carried out during the Second World War, although not the last *per se*. Glider troops successfully rescued Mussolini from incarceration in the Gran Sasso hotel in September 1943, a reinforced parachute battalion captured the island of Leros in the Dodecanese in November that year, and an SS parachute unit came close to capturing Tito with a combined parachute and glider assault on 25 May 1944. The final German airborne operation of the war was a night parachute drop in support of the German offensive in the Ardennes in December 1944. Details of this operation highlight the depths to which the once mighty German airborne arm had sunk by that time. Fuel and aircraft shortages necessitated an attack in three waves, and the aircrew involved had no experience in dropping parachutists or night flying. The attack went in on the night of 16-17 December 1944, but only ten of the eighty aircraft located the drop zone in high winds and snow; others dropped their human cargoes as far afield as Bonn in Germany, and in Holland. Only three hundred and fifty men eventually rallied. Thereafter, a combination of arctic weather and US sweeps obliged a hundred or so survivors to break out for the German lines on 20 December 1944. They had achieved little except to prompt US forces to pay more attention to rear area defence for a short period.²⁸

The Second World War saw the establishment of two further airborne forces. The Japanese set up four parachute training centres in 1940 with the help of German

instructors, and the Imperial Army and Navy established their own separate airborne arms. By late 1941 the Navy's force totalled 2,000 men, and that of the Army 6,000; the Army force also included a glider and air-landing element. A battalion-sized force of naval paratroops successfully seized a Dutch airfield in the Celebes Islands in January 1942. On 14 February 1942 a larger operation seized British and Dutch oil refineries at Palembang, but not before the installations had been seriously damaged by demolition charges, and paratroops were dropped in support of Japanese sea landings on Timor on 21 and 22 February 1942. The last major Japanese operation came on 6 December 1944, when US airfields on Leyte in the Philippines were targeted by a combined night parachute and airlanding attack. Most of the Japanese transports were shot down before reaching their drop points, but it still took forty-eight hours to eliminate the paratroops that got through. In that time they succeeded in destroying fuel stocks and a small number of aircraft, and damaging a number of others; this set US plans back by around two weeks. Ironically, much of the mopping up was carried out by units of the US 187th Parachute Infantry Regiment, part of the US 11th Airborne Division that was stationed in the area.²⁹

Last but by no means least was the United States, whose airborne effort ultimately dwarfed that of all the rest in numbers of men and of aircraft.³⁰ The US effort closely paralleled that of the British, albeit without the constraints in men and equipment suffered by the latter. The most important difference from a structural perspective lay in the fact that the United States Army Air Force was, as its title suggests, part of the US Army, and not an independent arm like the RAF. As in Britain, control of the new airborne force rapidly became a bone of contention, and by July 1940 the infantry, engineers and air corps branches were pushing their cases. In the US case, however, head of the Army General George C. Marshall had the authority to make the necessary decision and the power to enforce it, and control went to the infantry branch.³¹ It is fascinating to speculate how the British airborne effort might have profited from a similar level of control being exerted over the Air Ministry and War Office at the same time.

A Parachute Test Platoon was established on 1 July 1940 at Fort Benning, Georgia, and the first US parachute battalion was formed on 16 September. By late 1941 there were four US Army parachute battalions, and on 30 January 1942 it was decided to expand the four parachute battalions into regiments. A dedicated Airborne Command to oversee them was established on 21 March 1942. In September the 456th Parachute Field Artillery battalion was set up as a training unit for further airborne artillery units. By 1945 there were over forty parachute infantry battalions, thirty glider infantry battalions and a variety of other airborne units, including artillery and engineers.

The rapid expansion of the US airborne force necessitated the formation of airborne divisions on the German and British model. The 82nd and 101st Airborne Divisions were activated on 15 August 1942, the 11th Airborne Division on 25 February 1943, and the 17th Airborne Division on 15 April 1943. The 82nd Airborne participated in the fighting in Sicily and Salerno in Italy, before being withdrawn to join the 101st Airborne in the UK in February 1944; the 101st moved straight from the US to Britain in September 1943. Both divisions were used to secure the western flank of the Allied beachhead in Normandy in June 1944, participated in the ill-fated Operation Market-Garden in Holland in September 1944, and operated in the ground role in the Ardennes in December 1944 – January 1945. The 17th Airborne Division arrived in Europe in August 1944, fought in the ground role from December 1944 to February 1945. It was then withdrawn and took part in the airborne operation to cross the Rhine in March 1945.

The 11th Airborne Division served in the Pacific theatre from January 1944. Elements of the division made a total of four combat jumps in the Philippines, and were among the first US troops flown into Japan after the Japanese surrender. Alongside all this, it should also be noted that the US also developed a massive airborne training infrastructure, and produced sufficient transport aircraft and gliders not only to deploy this vast force, but also to provide air lift capability for Allied airborne forces as well. For example, the US Army Air Force (USAAF) lifted the entire parachute portion of the first wave of the British 1st Airborne Division into the Arnhem area in September 1944. The only British parachute troops to jump from RAF aircraft there were 1st Airborne's pathfinder unit, 21st Independent Parachute Company.³²

III. Sensible Investment or Spectacular Blind Alley: The Value and Effectiveness of Airborne Forces

This brief résumé of airborne activity during the Second World War shows that the British were not alone in putting a great deal of effort and resources into their airborne force, although it does not automatically follow that this investment was justified. Take, for example, opinions expressed by the first large-scale practitioners of airborne warfare, the Soviet Union and Nazi Germany. The severe losses incurred by Soviet airborne forces at Viaz'ma, Demiansk and in crossing the Dnieper between January 1942 and September 1943 the process had "...a sobering effect on the [Soviet] High Command's view of the utility of parachute troops".³³ This did not deter the Soviets from using parachute spearheads in their attack into Manchuria in 1945, however. Fifteen separate and highly successful operations employed forces between platoon and battalion size, to seize major

transport arteries, command installations and airfields in front of advancing Soviet armoured forces.³⁴ It is also significant that the Soviets maintained, and the Russian Confederation of Independent States continues to maintain, a comparatively huge airborne force. At its peak in the 1980s, this force numbered eight full divisions, equipped with custom designed and parachute-droppable armoured fighting vehicles, a capability unmatched by any other military in the world.

Similarly, German losses on Crete prompted Hitler to turn away from airborne operations on the grounds that the "...parachute weapon depends on surprise [and] the surprise factor has now gone".³⁵ Hitler's adverse reaction to the losses sustained by "his" *Fallschirmjäger* may have been prompted by his front line experience during the First World War. More importantly, his reaction strongly suggests that Hitler considered the psychological impact of airborne operations to be paramount. This somewhat blinkered view totally overlooks the potential of airborne forces in a less spectacular tactical and/or operational context, although subsequent make it clear that Hitler's views were not universal within the German military. As we have seen, not only did the German airborne force remain in being until the end of the war, but it also carried out separate small-scale *coup-de-main* operations aimed at liberating Mussolini and capturing Tito, along with larger and more conventional parachute operations. The latter included dropping reinforcements in North Africa and Sicily, the seizure of the Dodecanese island of Leros, and an operation in support of the Ardennes offensive in December 1944.

These examples show that measuring the effectiveness of airborne warfare and the requisite forces is a difficult proposition, with views varying widely even amongst those closely involved in the matter. That said, some attempt to achieve this difficult goal must be made, in order to put the subject of this thesis into context. There is also the matter of how to judge the value of such operations. There is insufficient space here for a detailed analysis of all the airborne operations carried out in the West during the Second World War, so an examination of a representative sample of airborne operations will have to suffice. The analysis will concentrate mainly on four operations from each end of the airborne scale, two parachute raids and two divisional sized operations, of which one of each category have been classified rightly or wrongly as a failure. British airborne forces carried out all the operations selected, a choice made in part because the British example is the focus of this thesis, but mainly because they provide the clearest illustrations of the points being made.

Let us begin by considering the British parachute raid on the Tragino Aqueduct in Southern Italy in February 1941, an operation covered in detail in Chapter Five above. Strictly speaking, the operation was a failure, insofar as the results did not meet the planner's expectations. Although an aqueduct was destroyed, this did not lead to the expected disruption of drinking water supplies to ports of Bari, Brindisi and Taranto, which were heavily involved in supporting Italian operations in Albania, and the entire raiding force was captured during its withdrawal. Operation Colossus could therefore be cited as evidence against the effectiveness of airborne operations, but such a judgement would be an oversimplification, because the reasons for the failure can be attributed not to the method, but to factors that would have hamstrung any operation. Faulty intelligence and unrealistic assumptions were foremost among these. The target proved to be constructed of reinforced concrete rather than the brickwork. This meant that the demolition charges were insufficient for the job, although the RE officer with the raiders nonetheless succeeded in demolishing a supporting pier, thereby cutting the waterway and accomplishing the raid's specific objective.

That this failed to achieve the expected degree of disruption was not the fault of the concept or the raiders, but of the planners. The optimistic assumption that the raiders would be able to cover the sixty miles to the coast for extraction in the time allowed proved similarly misplaced, with predictable results. In fairness, it has to be acknowledged that the planners themselves were working in the dark, given that the Tragino Raid was the first of its kind launched by British forces. In addition, the raid was conceived at least in part to demonstrate the efficacy of the airborne method, which may have encouraged the planners to err on the side of optimism. Be that as it may, the fact remains that the raiders succeeded in carrying out their allotted mission in the face of unforeseen problems, and in cold military terms the loss of a comparatively small team of raiders was a fair price for the anticipated results. This fact was made abundantly clear to the raiders when they volunteered. It should also be remembered the mission could only have been carried out using parachute insertion, given that the RAF considered hitting it with aerial bombs to be impossible. The fact that the local population detected the raiders as they exfiltrated strongly suggests that a sea-insertion would have led to a similar outcome before the target was reached, especially given that the raiders would have been weighed down with their demolition equipment going in.

Unrealistic expectation and poor intelligence are recurring themes in the history of airborne operations. The German *coup-de-main* attack against the Corinth Canal Bridge in Greece on 26 April 1941 provides a close parallel to the Tragino episode, for example.

Student's *Fallschirmjäger* captured the bridge as planned, but higher authority launched the operation too late to achieve its intended aim of cutting the sole escape route for the retreating Allied forces. The Corinth operation also highlights the importance of a further vital but less tangible factor, that of luck. Although captured intact, the bridge was subsequently destroyed when a stray shot detonated the Allied demolition charges, which had been disconnected but not removed.³⁶ Thus, while the operation can be classified as a failure, it is again clear that responsibility again lies largely other than with the airborne method or troops involved.

The British raid on the German radar station at Bruneval, twelve miles north of Le Havre in France, in February 1942 provides a clear illustration of the effectiveness of the airborne method in a small-scale raiding context.³⁷ Operation Biting also shows how well the British had taken on board the lessons of Tragino. By the end of 1941, Bomber Command losses were running at around four per cent of the aircraft committed, an unsustainable rate largely due to the efficiency of German radar, and of the *Würzburg* type used to vector German night-fighters onto specific targets in particular.³⁸ Consequently, when air reconnaissance identified the installation near Bruneval as a *Würzburg*, a high level decision was taken to launch a raid to capture the apparatus for closer examination.

Strong German defences along the coast and the distance from the coast to the objective ruled out a seaborne attack, so an airborne attack followed by sea evacuation was decided upon. Gale selected the 2nd Parachute Battalion's C Company for the job, nicknamed "Jock Company" because all its members were volunteers from Scots regiments. Jock Company's commander was Captain John Frost, who as CO of the 2nd Battalion, The Parachute Regiment, was to hold the road bridge at Arnhem two and a half years later.

The final plan saw Jock Company divided into four parties, and included a RAF NCO radar specialist to examine and photograph the *Würzburg*, and a section of airborne Royal Engineers (REs) to dismantle and carry off key parts for further examination. All told, the force consisted of one hundred and twenty men. The raiders were to be dropped in three waves onto a drop zone half a mile or so east of the target. The first wave was to seize the beach for the evacuation, and was dropped first because it had the most ground to cover. The second wave was divided into four groups. One was to act as a blocking force between the objective and a company-sized German garrison located a few hundred metres to the north. The second, led by Frost, was to clear a nearby villa reportedly used as by the Germans as billets for the radar station personnel, while the third group seized the radar station itself. The fourth group consisted of the RAF radar expert and the RE section. The

third wave was to provide a landward blocking force and reserve, and then as a rearguard for the withdrawal to the beach pick-up site. To complicate matters further, the operation had to be launched when sufficient moonlight for the bombers coincided with a rising tide for the evacuation force. This narrowed it down to a window of four days, 24 to 27 February 1942. Adverse weather conditions led to four successive cancellations, but the operation was finally launched a day late. The first Whitley took off for Bruneval at 10:30 on the night of 27 February.

In the event, things did not proceed exactly to plan. The first wave was dropped over a mile short of the correct drop-zone, the villa proved to be unoccupied, and the No. 38 wireless sets Frost was relying on to maintain contact with his outlying units failed to function.³⁹ Ironically, two signallers who missed the pick-up were able to contact Frost with a No. 18 set in mid-Channel, to report their intention of evading and escaping. Unfortunately both were subsequently captured.⁴⁰ In addition, the alarm was raised almost immediately as the paratrooper's descent was seen by a variety of German observers, and by coincidence elements of the local German garrison were on exercise in the area at the time.⁴¹

However, Frost's blocking forces succeeded in discouraging the German garrison until the RE party had dismantled the apparatus pointed out by the RAF expert, and then moved it under fire by two a wheeled trolley to the beach, along with three German prisoners captured at the radar station. As the main body prepared to assault the unsubdued German beach defences, the misdropped first wave took them in the rear and routed them, having navigated across country to reach their allotted station. The extraction force of assault landing craft located Frost's green signal flares more promptly than during training exercises, and lifted off all the raiders who reached the beach, the German apparatus and the prisoners by 3:30 on the morning of 28 February 1942. The entire operation had therefore been successfully carried out in a mere five hours, for a cost of two dead and six captured.

In the immediate sense, the overwhelming success of the Bruneval raid was due largely to simply avoiding the errors of the prior effort at Tragino. Detailed and up to date intelligence on the target, the surrounding area and the German defences was provided by the French resistance, and the presence of the RAF radar expert on the spot greatly aided the choice and removal of relevant parts of the German apparatus. More importantly, detailed rehearsals based on the intelligence and technical information showed that the

objective was attainable, including the withdrawal phase that was neglected at Tragino, before the operation was launched.

The value of the raid proved to be considerable. The mere fact that a parachute force could enter and leave German occupied territory virtually at will was a useful morale booster in itself, particularly as it came after a series of British defeats including the loss of Singapore to the Japanese. More importantly, however, the capture of the *Würzburg* components allowed the formulation of counter-measures to aid Bomber Command in its night bombing offensive against Germany. Specifically, it led to the introduction of "Window", small metal foil strips that showed up on a *Würzburg* screen as an individual aircraft. Jettisoning bundles of Window thus totally blinded the German night-fighter control system, a technique first used with great effect on a raid against Hamburg on the night of 24-25 July 1943.⁴² In the long term therefore, the actions of Frost's Jock Company and companions at Bruneval proved indirectly to be of strategic importance, and probably saved a great many lives in RAF Bomber Command into the bargain.

Like the German glider assault on the Eben Emael fortress in May 1940, the Bruneval raid therefore provides a clear example of the value and effectiveness of airborne operations in a small-scale context. Both operations were only possible from the air, and both achieved results out of all proportion to the forces employed. However, small-scale airborne operations only make up half the airborne story, and the less spectacular end at that. Consequently we must now examine the other end of the airborne scale, in order to ascertain the value and effectiveness of the much larger divisional and multi-divisional airborne operations carried out during the Second World War. Again a perceived failure and a success will be examined, and again both examples will be British operations.

Operation Market Garden, launched in September 1944, provides the most striking and oft quoted piece of evidence against the value and efficacy of airborne warfare.⁴³ Market, the airborne side of the operation, was launched on Sunday 17 September 1944, and remains the largest and most ambitious airborne operation ever launched. It was intended to capitalise on the German defeat in Normandy by rapidly advancing on a narrow front into German occupied Holland, before swinging east into northern Germany, thereby opening up the possibility of bringing the war to a conclusion by the end of 1944. The ground advance by the British XXX Corps was to be preceded by a sixty-mile airborne spearhead between Belgian-Dutch border and the town of Arnhem, the purpose of which was to seize and hold a series of vital water crossings, particularly those at Eindhoven, Nijmegen and Arnhem itself. Three airborne divisions were assigned to the operation.

The US 101st and 82nd Airborne Divisions were responsible for the southern and central sections of the corridor respectively, and the British 1st Airborne Division was given the most northerly objective, the rail and road bridges at Arnhem.

The US divisions succeeded in fulfilling their part in the operation, albeit in the face of stiff German resistance, and were relieved by advancing ground forces, although the latter had to assist the 82nd Airborne in seizing the main bridge at Nijmegen. Events did not unfurl as smoothly at Arnhem, however. The Arnhem rail bridge was demolished as elements of British 1st Airborne approached, and only a small force gathered around the bulk of John Frost's 2nd Battalion, The Parachute Regiment, succeeded in reaching the road bridge, where they were eventually overwhelmed after three days of heavy fighting. The bulk of 1st Airborne sustained heavy losses attempting to reach Frost, before being forced back into a defensive perimeter at Oosterbeek, a couple of miles west of Arnhem proper. There the remnants of the division attempted to maintain a presence on the north bank of the Neder Rijn, but were forced to evacuate on the night of 25-26 September 1944.⁴⁴

John Terraine's view of the operation, as stated in his history RAF operations in Europe, neatly sums up subsequent criticism of airborne forces and of airborne warfare with relation to Arnhem and in a more general sense:

“We return here [meaning Arnhem] to the bitter lesson of D-Day – the sheer wastefulness of the airborne style of warfare...[and]...the waste of *élite* troops.”⁴⁵

If the losses incurred by 1st Airborne and its attached units are used as the yardstick, this line of argument appears justified. Of the 11,920 men delivered to Arnhem by parachute or glider 1,485 were killed, 6,525 were taken prisoner or evaded capture (including approximately 2,000 wounded), and 3,910 were successfully evacuated. To put this into perspective, 1st Airborne casualties were double the combined casualty totals for both the US airborne divisions involved in Market Garden, who themselves participated in some extremely heavy fighting. There is also the matter of casualties suffered by the RAF, which lost sixty-eight aircraft, the great majority on resupply missions, along with 368 RAF aircrew and 79 Army despatchers.⁴⁶

However, closer analysis of events at Arnhem shows that while a variety of factors were responsible the debacle, inherent flaws in the airborne method was not among them. Again, unrealistic expectations made an unwelcome appearance. The back-to-front British practice of giving the RAF *carte blanche* in the selection of drop and landing zones,

irrespective of the views or needs of the troops they were delivering, resulted in 1st Airborne being dropped a minimum of seven miles west of their objectives. The RAF justified this on the grounds of concern over possible aircraft losses to German anti-aircraft fire, which also ruled out *coup-de-main* assaults on 1st Airborne's objectives. That it was able to take this responsibility upon itself was a direct result of the political horse trading between the Air Ministry and War Office in the period 1940-41 during the establishment and initial development of the British airborne force.

The RAF landing zone edict removed at a stroke the greatest attribute of airborne warfare, surprise, although in fairness it has to be said that aircraft losses in the first lift were minimal. Nonetheless, as the primary objective of Market Garden was to thrust deep into enemy territory, the RAF's behaviour was very much a case of putting the cart before the horse, and arguably amounted to little more than sacrificing airborne lives and achievement of the mission for the preservation of RAF resources. Incidentally, neither was unrealistic expectation confined to the airborne end of Market Garden. Errors there were compounded considerably by the official expectation that 1st Airborne would be relieved by advancing ground forces within forty-eight hours, a somewhat optimistic view given the conditions faced by the ground elements to say the least.⁴⁷

All this was beyond the control of 1st Airborne, and matters were compounded further still by the failure of the division's parent formation, 1st Allied Airborne Army (1st AAA), to allocate its considerable but nonetheless limited resources to maximum effect. For reasons that have yet to be explained General Browning, commander of 1st AAA chose to use thirty-eight gliders to fly his headquarters into the US 82nd Airborne's zone in the first lift. There it languished without contributing anything to the battle it could not have done from Britain. Assigning thirty-four of these aircraft to 1st Airlanding Brigade would have permitted that formation to arrive at Arnhem in its entirety on the first day of the operation, rather than over two lifts.⁴⁸ The fact that 1st Airborne's efforts to reach its objectives were hamstrung by the need to divide its strength in order to hold its far-flung landing zones illustrates the negative impact of General Browning's decision.

Add to this the fact that 1st Airborne's new commander lacked any airborne experience whatever, that the bulk of the division exhibited a marked lack of urgency after landing, and that intelligence on German strength in the Arnhem area was withheld from the division (again for reasons that have yet to be satisfactorily explained), it is hardly surprising that 1st Airborne failed to achieve its objective. The wonder is that it achieved as much as it did, given that it managed to hold out against elements of two SS *Panzer*

divisions for nine days, rather than the projected forty-eight hours against poorly equipped German rear-echelon troops as briefed.

This analysis therefore totally refutes the criticisms of airborne warfare encapsulated in the quote from Terraine cited above. It is doubtful that the “airborne style of warfare” was any more costly in terms of men and material than high tempo mechanised operations, as typified by the British activity in Normandy between June and August 1944 for example. Further, any “wastage of *élite* troops” was directly attributable to high level British incompetence rather than imaginary, inherent flaws in the airborne method. With specific regard to the Arnhem case, the present author firmly believes that, contrary to much popular opinion, Market Garden could have achieved its immediate objectives. This could only have been possible, however, with a complete reconfiguring of the British part of the scheme, and most crucially forcing the RAF to conform to the needs of 1st Airborne rather than vice-versa. A force of approximately company strength held onto the north end of the Arnhem road bridge for almost three days, virtually unsupported and in the face of elite *Waffen* SS troops equipped with armour and heavy fire support. The ever-shrinking remnants of 1st Airborne did the same for nine days at Oosterbeek. Imagine, therefore, what those same men could have achieved had they been delivered into the immediate area of the Arnhem bridges in brigade strength or greater.

This is of course conjecture, but conjecture supported by the final piece of evidence in support of the view that the airborne method was both valuable and effective. Arnhem was a large-scale operation that failed, for whatever reason, and it therefore necessary to examine an operation on a similar scale that succeeded. For this it is necessary to look no further than the activities of the 1st Airborne Division’s sister unit, the 6th Airborne Division, on the night of 5-6 June 1944.

The 6th Airborne Division was entrusted with arguably the most critical mission connected to the invasion of Europe by Allied forces on 6 June 1944, that of securing the eastern flank of the invasion beachhead. Before examining how the division planned and achieved this, it is necessary to provide a little geographical detail about the area in which the division was to operate. The Caen Canal and River Orne followed a parallel course north from the port of Caen, which lay nine miles from the Channel coast, to exit at the resort town of Ouistreham. Ouistreham also marked the left boundary of the most easterly invasion beach, codenamed Sword. Another river, the Dives, flowed north a further seven miles east of the Orne, and exited into the English Channel through the town of Cabourg. The area between the Orne and Dives contains a roughly central ridge of high ground,

again running on a north-south axis, and a large wooded area called the Bois de Bavent. In addition, a large swathe of land either side of the Dives was flooded.

The task of securing the eastern flank of the invasion beachhead was far more complex than merely occupying the area between the Rivers Orne and the Dives, and thus included a number of sub-missions. First, the crossings over the Orne and the Caen Canal at Bénouville had to be seized intact and held so 6th Airborne could be reinforced by the seaborne forces, and for future use as a breakout route from the invasion beachhead. A company of the 2nd Battalion, The Oxfordshire and Buckingham Light Infantry (2 Ox & Bucks) under Major John Howard were responsible for seizing the bridges by *coup-de-main*. Howard's men were to be delivered by six gliders as close as possible to the bridges, three to each. They were to be reinforced by the 7th Battalion, The Parachute Regiment, which was to parachute in thirty minutes after the glider *coup-de-main*.⁴⁹ Both units were to come under command of 5th Parachute Brigade, commanded by Brigadier Nigel Poett; the remainder of the brigade (12th and 13th Battalions, The Parachute Regiment) was to take up screening positions to the east. Poett's final orders from Major-General Richard Gale, 6th Airborne's commander, reflect the vital importance of this part of the division's mission: "The whole of your area must be held. Infantry positions will be fought to the last round and anti-tank guns to the muzzle."⁵⁰

It should be noted that Gale was a highly professional officer with a distinguished record stretching back to the First World War, and was not given to histrionics. His order to Poett merely reflected the fact that Howard's *coup-de-main* party and the 7th Battalion was the last line of defence between a German counter-attack and the invasion beachhead. The reference to anti-tank guns is especially significant. The nearest German armoured unit to the invasion beaches, 21st *Panzer* Division, was concentrated south of Caen, with outlying units located on the western and south-eastern edges of 6th Airborne's area of responsibility. In addition, a further four German armoured divisions (2nd *Panzer*, 12th SS *Panzer*, *Panzer Lehr* and 116th *Panzer*) were located east and south-east of Caen; their most direct route to the invasion beaches was therefore across the Orne and Caen Canal.

The location of these German mechanised forces explains 6th Airborne's second major priority, the destruction of the five bridges over the Dives. Responsibility for this was given to the units whose drop zones they were closest to. The 1st Canadian Parachute battalion was responsible for the two most northerly bridges, and the 8th Battalion, The Parachute Regiment for the three southern ones at Bures and Troarn. The latter unit was to

jump with the 3rd Parachute Brigade, and move rapidly east from that formations firm base to achieve its mission.

6th Airborne was also given a further special task, the elimination of a fortified German gun battery that menaced Sword beach. Located at Merville in the north of the divisional area, the battery was to be destroyed by the 9th Battalion, The Parachute Regiment, reinforced with sapper and anti-tank elements. The attack was to be preceded by an aerial bombardment by RAF heavy bombers, and three Horsa gliders scheduled to land atop the battery as the 9th Battalion made its assault. As a fail-safe, the Royal Navy cruiser HMS *Arethusa* was to bombard the battery after dawn unless a success signal was received.

Thus 6th Airborne's mission was both complex and absolutely crucial to the success of the invasion. The Orne and Caen Canal bridges at Bénouville were the first target, and Howard's *coup-de-main* party from the Ox & Bucks were the first invading Allied troops to set foot in Europe, with five of the six Horsa gliders landing precisely on time and target at 00:20, 6 June 1944. Both bridges were seized intact from their German defenders within fifteen minutes of landing. The 7th Battalion reinforced Howard's men by 03:00 hours, in spite of a scattered drop. German attacks, some including tanks and armoured cars, began at around 05:00 and continued throughout the day. Commando troops from the British 1st Special Service Brigade reached Bénouville just after midday, but were funnelled straight over the bridges to bolster 5th Parachute Brigade's other battalions, which were hard pressed by German counter-attacks. At one point a large German aerial bomb struck the Caen Canal bridge, but failed to detonate, and two unsuspecting German coastal craft moving inland down the Canal were engaged with small arms and a PIAT.⁵¹ One was driven aground and the other beat a hasty retreat the way it had come. Leading elements of the unit scheduled to relieve the defenders at Bénouville, the British 3rd Infantry Division, linked up with them at 19:00 hours on 6 June, and a full relief was complete by 01:00 hours on 7 June.⁵²

The various battalions charged with destroying the Dives bridges succeeded in carrying out their missions, despite scattered drops that spread some of their elements widely across the divisional area and sometimes beyond. The 1st Canadian Parachute Battalion encountered less difficulty than the 8th Battalion did at Bures and Troarn to the south. The RE demolition teams attached to the 8th battalion were unable to reach the battalion rendezvous, and thus proceeded to their objectives independently. The team assigned to the road and rail bridges at Bures reached their target at the same time as the lead elements of the 8th Battalion, and successfully carried out their task. However, German defences in

the outskirts of Troarn held up the regular paratroops, so the RE detachment risked a high-speed dash with its single Jeep and trailer through the town. This reached the bridge, which was then demolished by the simple expedient of unhitching the trailer full of demolition charges on the bridge, under fire, and abandoning it with a short fuse. The heavily laden Jeep then retraced its route through Troarn, picking up one of its passengers who had fallen from the vehicle on the way in en route, and linked back up with the 8th Battalion.⁵³

However, it was at the Merville Battery that things went most awry. The 9th Battalion dropped at 00:50 hours on 6 June, but was widely scattered. Lieutenant-Colonel Terence Otway was only able to gather one hundred and fifty of his men from an expected total of around seven hundred, and the missing included virtually all the specialist troops and equipment around which the assault had been meticulously planned and rehearsed. In addition, the RAF heavy bomber raid on the battery had failed to hit the target, but did manage to hit the 9th Battalion's drop zone instead, nearly wiping out the pathfinders from 22nd Independent Parachute Company as they were marking it out for the drop. Otway pressed ahead with the mission in spite of this, and succeeded in overrunning the battery at a cost of sixty-five killed, wounded and missing from his already severely depleted force. The four guns in the battery were put out of action, and the survivors withdrew with twenty German prisoners before HMS *Arethusa* was scheduled to begin its bombardment.⁵⁴

Thus 6th Airborne achieved all of its disparate initial objectives, thanks to a combination of airborne *esprit*, determination and sound training, along with some old fashioned good luck. The task of Howard's *coup-de-main* party was eased by the fact that the Germans had for some reason removed their demolition charges from the Caen Canal bridge for storage in a nearby shed, for example. That said, the importance of luck was minimised by an abundance of the three former attributes. Otway's assault on the Merville Battery arguably provides the clearest example, but the performance of the division as a whole reflects these same qualities. The 7th Battalion, for example, was badly scattered and was only able to muster sixty per cent of its strength, but still managed to reinforce the Ox and Bucks *coup-de-main* party at Bénouville as scheduled, and the 1st Canadian and 8th Battalions also succeeded in the face of similar handicaps. It is also important to note that these same attributes were present at the personal level. Individual soldiers were rejoining their units throughout 6 June and after, having navigated their own way through the intervening territory and fought their own independent actions against German forces in the process. This not only says a great deal about the calibre of men involved, it also justifies the frequently criticised concentration of such manpower in airborne formations,

which is discussed in more detail in the next section. Suffice to say here that the examples cited above show that large-scale airborne operations are invariably high value, high risk ventures, and to entrust such operations to anything less than the best personnel available would be foolhardy in the extreme.

These four examples tell us a great deal about the value and effectiveness of airborne warfare and airborne forces. With regard to the former, it is clear that the additional capability conferred by properly configured and equipped airborne forces is extremely valuable indeed. None of the operational examples cited could have been carried out by any other medium, and it can be argued in the case of the Normandy operation that the invasion of Europe simply could not have gone ahead without an airborne force to secure the flank of the invasion beachhead. In addition, an airborne force can be a force multiplier, in the sense that its mere existence obliges the enemy to divert resources into guarding against the possibility of airborne attack. In the aftermath of the Tragino raid, for example, the Italians assigned more troops to guarding strategic targets,⁵⁵ and the British themselves put a great deal of effort into planning and preparing for a German airborne invasion that never materialised from the middle of June 1940 onward.

Of course, this can cut both ways. One reason for the swift German reaction against the British 1st Airborne Division's landings at Arnhem was the fact that both the 9th and 10th SS *Panzer* Divisions had been originally raised for operations in the west, and had trained extensively in anti-airborne operations before the Normandy invasion.⁵⁶ None the less, the threat implicit in the mere existence of an airborne force can be a force multiplier, a land warfare equivalent to the concept of a fleet in being. The beneficial effects of this can also extend into the initial stages of large airborne operations, when the enemy can be confused as to the objective of the operation by its scale. Probably the best example of this was the reaction of the 21st *Panzer* Division to the 6th Airborne Division's arrival between the Rivers Orne and Dives on 6 June 1944. Part of 21st *Panzer* was located west of the Orne, and thus ideally placed for a counter-attack against Sword beach. However, the activities of 6th Airborne resulted in the bulk of 21st *Panzer* being deployed to the east of the Orne and thus away from the vulnerable invasion beach.⁵⁷ Ironically, airborne forces being accidentally scattered during delivery heighten this diversionary effect. As we have seen, elements of 6th Airborne were scattered widely across the division's operational area and beyond, which encouraged 21st *Panzer's* incorrect appreciation of the situation in the early hours of 6 June. The effect was even more marked at the western end of the invasion area, where the US 82nd and 101st Airborne Divisions were even more widely scattered, with some troops being delivered as much as fifty miles from their intended destination.

With regard to the effectiveness, the analysis of the so-called airborne failures cited above reveals a catalogue of ignorance and errors that would have hamstrung any military operation, and it therefore curious that such episodes are routinely trotted out as evidence of alleged fatal flaws inherent in the airborne method. To draw an analogy from these examples, it is frequently overlooked that the most fundamental reason for the failure of the British 1st Airborne Division at Arnhem was the failure of the relieving mechanised forces to arrive within their scheduled time frame. This was in turn largely due to the fact that those forces were operating in conditions inimical to their capabilities. Specifically, tanks were being asked to operate along elevated roads running through dead flat country that offered virtually no concealment, and in which they were likely to bog down if they left the roads. The present author is unaware of any calls for mechanised warfare to be abandoned as wasteful and impracticable because tanks invariably fail to succeed when obliged to operate in totally unsuitable conditions. Indeed, according to the same logic frequently used to criticise airborne warfare, development of tank should have been curtailed after the tank failed to live up to expectations twice in succession, at Bullecourt in April 1917, and during the Third Battle of Ypres in August the same year.⁵⁸

The point is that airborne operations and troops are no different to their ground-based equivalents, insofar as they can only be as effective as the people controlling them. The airborne option is not a magic bullet, and the troops trained for such operations are not supermen, however they may view themselves. That said, airborne warfare is an extremely effective, not to say potentially vital, adjunct to the range of tactical and operational options available to military commanders, again providing it is properly used. It is relevant in this regard to point out again that the examples cited above were only feasible because of the option of deployment from the air, irrespective of how vital they might have been to the success of concurrent or later operations. This is borne out by the fact that in spite of the critics, the world's major armies have retained a significant parachute element since 1945. The French, who made extensive use of parachute troops in their colonial wars in the 1950s, maintains an operational airborne division. The British Army currently fields an air assault brigade configured for parachute or helicopter delivery, the US 82nd Airborne Division remains the US Army's rapid reaction force and, as cited at the beginning of this section, the Russian Commonwealth of Independent States also maintains a substantial airborne force.

The reason for all this is simple. No one has yet come up with a better method of getting battle-ready troops on the ground at short notice and over long distances than the parachute. In addition, airborne units have a relatively small logistical tail, and are thus

trained, equipped and configured for rapid deployment at short notice. This explains the high profile of airborne units in military, but none-airborne, operations since 1945. The 173rd Airborne Brigade and 101st Airborne Division were among the first US Army units deployed to Vietnam in the mid-1960s, for example, and the Soviet moves into Czechoslovakia and Afghanistan in 1967 and 1980 respectively were spearheaded by airborne troops. Similarly, two battalions of The Parachute Regiment were among the first units despatched to the Falkland Islands in 1982, the 82nd Airborne Division literally was Operation Desert Shield for a period in 1990, and the Parachute Regiment was again in the forefront of recent operations in Kosovo and Sierra Leone. Consequently, despite recurring claims that their capabilities and indeed existence are anachronistic, airborne forces look set to retain their relevance in the confused military climate of the early 21st century.

IV. The British Airborne Effort: Justified Diversion or Merely a Waste of Resources?

The preceding section justifies airborne warfare in the broad sense, and the maintenance of the specialist forces to prosecute it. However, whilst many of the arguments contained therein are equally applicable to the British case, some areas require more specific examination.

Foremost among these is the frequently repeated charge that airborne forces siphoned off high quality Army manpower that would have been better spread around more conventional units. Terraine again provides a convenient précis of this argument:

“Worst of all the ‘offenders’ [the previous paragraph similarly criticised the Commando force], it must be said, were the Airborne Forces, with their exacting physical and psychological requirements. There is an awful irony in the spectacle of the line infantry divisions in Normandy struggling to perform their ordinary duties, while beside them the 6th Airborne...consisting entirely of the type of men that the line infantry so palpably lacked, fought as *line infantry* [original emphasis] for 82 days.”⁵⁹

Terraine’s line of argument here contains a number of glaring flaws. First, he puts the cart before the horse. The above analysis of 6th Airborne’s initial actions in Normandy strongly suggests that personnel of a lower calibre would have been incapable of achieving their individual objectives, with the likely result that the line infantry divisions would not have been in Normandy to perform their “ordinary” duties. Put simply, the reality is that the rigours and realities airborne training and operations demand above average human

material. Incidentally, the view that British line infantry were inferior is by no means universal, not least amongst men who served in that capacity.⁶⁰

Second, the fact that 6th Airborne remained in the line for so long was a gross misuse of highly trained and specialised manpower, rather than an admission that any infantry unit was capable of performing airborne operations as Terraine implies. The US 82nd and 101st Airborne Divisions, for example, were withdrawn from Normandy by mid-July 1944.⁶¹ In this instance, the British profligacy with its airborne manpower may have had even more serious repercussions later. Both US divisions were able to participate in Market-Garden, where their recent combat experience proved invaluable, whereas the British had no option but to deploy the comparatively inexperienced 1st Airborne Division.

More seriously, however, Terraine is blaming the British airborne force for much deeper problems in the British system of selecting and training its military manpower. Recent research by David French shows that in general, the British Army continued to value obedience over initiative at virtually all levels, and focused its training and selection procedures accordingly.⁶² Within the Home Army before D-Day, for example, there was a marked preference toward regular officers, not because they were necessarily competent, but because their superiors lacked any more realistic method of assessing their competence and thus stuck with what they knew.⁶³ Selection of the Army's rank and file was similarly handicapped. The War Office did not set up a Directorate of Personnel Selection until late 1941; and centrally administered intelligence and aptitude tests did not come into widespread use at the recruit training level until after July 1942.⁶⁴ Add to this the fact that the British forces *per se* were becoming overstretched by mid-1943, and that the infantry enjoyed the lowest priority for quality manpower of all arms and branches of the service.⁶⁵ It is therefore clear that to ascribe the British infantry arms allegedly less than stellar performance after D-Day to the fact that the best potential personnel had been siphoned off to man two miniature infantry divisions is an oversimplification to say the least. Rather, it provides a convenient cover for the far deeper and fundamental problems that were really responsible.

In addition, Terraine's thesis is further undermined by the fact that the practice of converting existing infantry units to the parachute or airlanding role en masse, with exemptions for only the physically unfit, became increasingly common as the war went on. There is also the fact that 6th Airborne's long sojourn in the line in Normandy was by no means uncommon for British airborne troops. 1st Parachute Brigade held the line in Tunisia in the winter of 1942-43, and its parent formation, 1st Airborne Division, operated

in the infantry role in the invasion of southern Italy in late 1943. This shows that the British Army got plenty of non-airborne use out of its airborne force.

However, in the British case, the real red herring lies not in the claim that the airborne force misdirected high quality Army manpower, but that it diverted resources from the RAF. This claim supports the consistent high-level RAF line identified in this thesis, but unfortunately it simply does not stand up to critical examination, principally because it is difficult to identify any such diversion. Admittedly, the RAF did form a dedicated transport organisation in the UK. By early 1944 this consisted of No. 38 Group and No. 46 Group from RAF Transport Command, which fielded a total of fifteen squadrons, each with between twenty-two and thirty aircraft. However, this was not the substantial equipment outlay it appears. No. 46 Group's five squadrons were equipped entirely with US produced Douglas C47 aircraft, and did not therefore impinge at all on RAF aircraft production. The same is largely true of No. 38 Group. Only two of its ten squadrons were equipped with first line aircraft RAF aircraft, the Handley Page Halifax. The remainder was equipped with obsolete Short Stirling heavy and Armstrong Whitworth Albemarle medium bombers. It should also be noted that this force was not set aside exclusively for airborne use. No. 38 Group was also responsible for dropping agents and equipment into occupied Europe, a not inconsiderable effort in the run up to the Normandy invasion.

The Stirling's poor operational performance made it a veritable death-trap for night bombing alongside more modern types,⁶⁶ whilst the RAF rejected the Albemarle as unsuitable after over a hundred had been produced.⁶⁷ Consequently, it can be argued that the creation of this transport capability provided the RAF with a convenient way of removing relatively large numbers of obsolete aircraft from Bomber Command's order of battle to make way for more modern types like the Avro Lancaster. It may also be significant that the provision of aircrew for No. 38 and No. 46 Groups potentially provided Bomber Command with a useful reserve pool of trained personnel. This casts a rather different light on Terraine's assertion that airborne operations diverted scarce RAF transport resources from more worthy tasks,⁶⁸ not least because it can be argued that the RAF only possessed a European transport capability *because* of the British airborne force. The pitiful dimensions of the RAF transport force in the UK in 1940 are amply illustrated above, and there is no obvious evidence that the Air Ministry intended to take pay the matter undue attention.

It is also pertinent to point out that despite claims to the contrary, the Air Ministry successfully maintained its original policy of keeping its provision for the airborne force to

the barest possible minimum. Thus, when Churchill attended another airborne demonstration by 1st Airborne Division at Netheravon on 16 April 1942, Ringway was able to muster a total of twelve Witleys for parachuting, augmented by nine Hawker Hector biplane glider tugs.⁶⁹ This not only prompted Churchill to pressurise the Air Staff for more aircraft, but also to establish a dedicated Airborne Forces Committee. This was set up on 1 May 1942, with a brief to “co-ordinate arrangements for the development, production, supply, transport and storage of all equipment for airborne forces, and to secure rapid decisions”,⁷⁰ with direct access to the Prime Minister if required.

The following month the Parliamentary Committee on National Expenditure held its own investigation into the provision of aircraft for the airborne force, and recommended that sixty surplus Armstrong Whitworth Albemarle bombers be allocated for airborne use immediately. On 19 June the Air Ministry also agreed to a phased transfer of eighty-six additional Witleys to No. 38 Wing. In effect, the latter undertaking meant that the Air Ministry had finally come up with the aircraft it had promised to provide two years previously, in June 1940. Even then, this development proved to be of limited utility, for it was discovered in August 1942 that the Witley was incapable of towing a fully-laden Horsa glider.⁷¹

Admittedly, the matter was complicated to an extent by Bomber Command’s need for obsolete bombers for use by its Operational Training Units. Consequently, “Bomber” Harris renewed his opposition to the allocation of RAF resources to the airborne force in a paper on 12 September 1942. In this he reiterated his scepticism regarding the utility of airborne troops, and claimed that provision on the scale advocated by the War Office would cripple Bomber Command. Churchill was thus caught between the conflicting needs of two of his pet projects, and was obliged to come down on the side of Bomber Command on 18 November 1942. The matter was to be reviewed in June 1943, and Churchill held out the prospect of obtaining additional transport aircraft from the US; this hope did come to fruition with the formation of the Douglas C47 equipped No. 46 Group in early 1944. In the meantime, the Air Staff attempted to restrict the size of the airborne force to two parachute brigades and a small glider force. However, Alan Brooke refused point-blank to break up 1st Airborne Division, and Army planning for further airborne expansion continued as cited above.

In the event, it was the arrival of large numbers of US-produced transport aircraft, both belonging to the US Army and provided direct to the RAF, which began to alleviate the transport shortfall from mid-1943. Of the one hundred and forty four aircraft deployed for

1st Airlanding Brigade's operation near Syracuse in July 1943, for example, one hundred and nine belonged to the USAAF.⁷² In May 1942 Churchill had obtained a promise from Roosevelt that four USAAF transport groups would be despatched to the UK as soon as possible, and US aircraft continued to make up an increasing proportion of Allied airborne transportation through to the end of the war. The USAAF IX Troop Carrier Command, for example, not only carried both the 82nd and 101st Airborne Divisions into Holland for Operation Market-Garden, but also provided the lift for all the British and Polish parachute elements deployed at Arnhem.⁷³ The USAAF therefore unwittingly assisted the Air Ministry in minimising its commitment to the airborne force.

It thus remains to deliver a verdict on whether that effort involved in establishing an airborne force was justified from a British perspective. The answer to that question has to be yes, not least based on the evidence presented above to justify the value and effectiveness of airborne forces *per se*. All these factors apply at least equally to the British example, but there are two additional factors to consider in the specific British context. First, the creation of an airborne force provided the Army with a rapid deployment capability it lacked hitherto. The value of this is illustrated by the activities of the 2nd Independent Parachute Brigade Group in Greece in October 1944. Originally part of 1st Airborne Division, 2nd Independent had remained in Italy when the division moved to the UK in November 1943, to maintain a parachute capability in the Mediterranean. Thus the brigade fought as conventional infantry in Italy, conducted a small-scale parachute operation in May 1944, and participated in the invasion of Southern France.⁷⁴

By October 1944 Axis forces were withdrawing from Greece, raising the serious possibility of a take-over of the country by Communist partisans. In order to forestall this, it was decided to use 2nd Independent to occupy Athens. A company-size spearhead jumped in dangerously windy conditions on 12 October, and the brigade was in position in Athens by 15 October, where it not only imposed order on a chaotic situation, but also averted a humanitarian disaster by guaranteeing food supplies to a large section of the population. 2nd Independent's parachute capability proved vital here, for it permitted the entire brigade to be deployed direct from the heel of Italy in the space of three days. In fact, the actual drop only required two days, but had to be spread over three days because of bad weather on 13 October. The point is further underlined by the fact that sea-borne infantry reinforcements did not arrive until the end of November.⁷⁵

The second factor to consider is the Army's original justification for establishing an airborne force back in mid-1940. This, it should be remembered, was to provide a

spearhead for an invasion of continental Europe. As we have seen, the 6th Airborne Division performed that role in an exemplary manner on the night of 5-6 June 1944, to the extent that its activities provide the definitive paradigm for the prosecution of large-scale airborne operations. With that one operation, therefore, the British airborne balance was paid in full.

V. Reflections

One of the most striking themes to emerge from this examination of the establishment of a British airborne force is the role played by luck. The case of Louis Strange provides an excellent example. It was only by the vagaries of the RAF postings system that Strange became involved in the airborne effort, and it was only coincidence that placed him at Combined Operations HQ at precisely the right moment to inherit control of the new airborne venture. It would also appear that Strange brought his own luck with him. This is well illustrated by the fact that he was able not only to locate pre-war stunt parachutists like Bruce Williams, Harry Ward, Bill Hire and their erstwhile pilot Earl Fielden, but also to recruit them to Ringway.

Strange's somewhat whimsical arrival onto the British airborne scene highlights a further facet of airborne luck, that of having the right man in the right place at the right time. His direct methods undoubtedly saved a great deal of time that a more conventionally minded officer would have wasted in observing bureaucratic niceties. This applies equally to a host of other officers from both services, and from within and without the airborne community. Those from the RAF included Harvey, Norman, Buxton, Hervey, Newnham and Cole-Hamilton. Their contribution may have been more circumspect than that of Strange, but it can be argued that working within the system ultimately achieved more than trying to buck it, once the initial establishment had been made. Their contributions should also be measured against the fact that the attitude of the higher RAF echelons to the airborne idea was ambivalent at best.

Luck was not merely confined to the acquisition of personnel for service at Ringway. There is the coincidental establishment of the Polish parachute force in Scotland, and the willingness of the Poles to share their research, which in turn enabled the British to cut many corners in expanding their own airborne effort. There is also the provision of US men and machines for airborne use, and not merely that the US aircraft manufacturing industry had sufficient capacity to supply its own needs and that of its Ally. There was also the appearance of the US-built Willy's Jeep, for example. Providing the airborne

force with motorised transport had been a priority virtually from the outset, but existing British-manufactured light vehicles were not sufficiently robust and proved to be poorly configured for transport by glider when the first full-scale mock up of the Horsa appeared in November 1941.⁷⁶ One of the officers invited to examine the mock-up at Ringway was US military attaché Lieutenant-Colonel Tom Wells, who arrived in one of the first Jeeps to appear in the UK. An impromptu test, using the assembled high-ranking officers for labour, showed that the Jeep fitted perfectly into the Horsa, thereby solving the airborne transport problem.⁷⁷ The airborne establishment was complaining about the non-arrival of their Jeeps in April 1942,⁷⁸ but by early 1944 they were being widely employed in a variety of roles by 1st and 6th Airborne Divisions.⁷⁹ It was later discovered that Jeeps could also fit into the bomb-bay of a Halifax, and four were delivered by parachute to SAS troops operating behind German lines in France after D-Day.⁸⁰

The generally favourable Army reaction to the airborne idea eased the task of the Army players in the drama, although this does not minimise their contribution or the importance of again having the right men in place. Rock was instrumental in selling his vision of the airborne idea to his superiors at the War Office, and Browning succeeded him in this promotional work. Gale's and Down's role in transforming No. 2 Commando into 1st Parachute Brigade has not received the recognition it merits, and all these players were fortunate to enjoy the backing of Dill and his successor Alan Brooke at the top of the War Office chain of command. It should also be remembered that luck could and did run in the opposite direction, and not just in connection with equipment failures such as that which killed Driver Evans and a succession of similarly unfortunate trainees. John Rock died in hospital on 8 October 1942 from multiple injuries sustained in a Hotspur crash on 27 September,⁸¹ and Nigel Norman was killed in a plane crash during 1st Airborne Division's move to North Africa in mid-1943. Working in the upper echelons of the airborne infrastructure could therefore be just as hazardous as participating operationally.

The ultimate right man in the right place in the early stages of British airborne development was undoubtedly Winston Churchill. Although the War Office began to examine the possibilities of airborne warfare following the German attacks in the Low Countries in May 1940, it was Churchill's order that elevated the creation of a British airborne force onto the official Whitehall agenda. The fact that Churchill was a keen military innovator, and had theorised on airborne matters long before 1940 guaranteed his enthusiastic support for the project. Incidentally, the establishment of an airborne force shows that Churchill's penchant for promoting unconventional projects could have a positively beneficial outcome for the war effort. Churchill possessed incredible stamina

for a man of his years, which was channelled into a high degree of single-mindedness and an impressive grasp of detail. Unfortunately, he also had a tendency toward micro-management, was frequently distracted by trivia, and was an inveterate meddler in military affairs.

These less desirable traits were simultaneously beneficial and deleterious to the establishment of the British airborne force. They meant that Churchill monitored the progress of his pet scheme, and was quick to intervene when progress failed to meet his expectations. This is precisely what happened following his visits to Ringway in April 1941 and April 1942. On the other hand, Churchill's general tendency toward micromanagement meant that his attention had to be spread wide and thin. In the specific airborne instance, this meant that he did not monitor progress as closely as was necessary. This in turn allowed a great deal of scope for obstructionism or just plain misunderstanding in the periods between the lack of airborne progress coming to his attention.

Luck is not the only theme to emerge from this study, however. It is also interesting to note the speed and degree to which the new arm was incorporated and regularised by the two services involved, despite claims by participants to the contrary. With regard to the RAF, this process occurred within and without the airborne infrastructure centred on RAF Ringway. Regularisation from within commenced with the arrival of Harvey in September 1940, and encompassed the subsequent removal of Strange and his more recalcitrant acolytes and their replacement with those loyal to the new regime, such as Newnham and Kilkenny as detailed in Chapter Seven above. The course of events shows this was not necessarily detrimental to the airborne project, but it does beg the question of how much this was driven by a desire for efficiency, as opposed to empire building. The process of absorbing the CLE into the RAF proper can be seen in the increasing involvement of outside Commands and agencies in the activity at Ringway, and the parallel reduction of the latter's autonomy. The interest shown by No. 70 Group in the doings of its new charge after inheriting responsibility from No. 22 Group in January 1941 is a prime example of this tendency.

The regularisation of the Army side of the matter went much further, although much of it, and especially the more deleterious effects, occurred outside the time frame of this thesis. The sidelining of Gale in favour of Browning for command of the airborne arm clearly shows that political acumen and connections were considered more desirable than mere operational competence. In practical terms, Army regularisation began with the decision to expand 11 SAS Battalion into a parachute brigade, and the arrival of Gale and Down to

oversee the process. The freebooting nature of the original parachute raiders may well have been incompatible with more conventionally oriented parachute operations. However, it can also be argued that the insistence that parachuting or gliding was merely a novel way of getting soldiers to the battlefield was carried too far in appointing British airborne commanders.

Browning's decision to place Major-General Robert "Roy" Urquhart in command of 1st Airborne in January 1944 is a good example of this tendency. The appointment was justified on the grounds that Urquhart was "hot from the battle", having commanded a conventional infantry brigade in Sicily.⁸² However, unlike Down whom he replaced or his subordinate brigadiers, Urquhart had no experience in commanding airborne troops or in airborne operations. The appointment was therefore curious, given that there was no shortage of officers with both qualifications already serving within 1st Airborne. This is not to suggest that airborne command is a black art, but airborne operations do require a different approach from more conventional ones, not least because of their high intensity and the limited support available to airborne formations. British command appointments differed significantly from US practice, where even general officers were expected to participate in the same rigorous training as their men. The fact that this threw up talented airborne commanders such as "Jumping Jim" Gavin and Matthew Ridgeway suggests that there was little wrong with the US system, and their performance also suggests that they benefited as commanders from the insight this provided. This contrast further highlights the degree to which the British airborne force remained firmly in the thrall of the Army establishment.

That said, attaining parachute or glider wings did not automatically guarantee competence in a commander. Major-General George "Hoppy" Hopkinson commanded 1st Airborne Division until he gained the dubious distinction of being the only British airborne general to be killed during the war, after being wounded in a skirmish with retreating Italian troops near Taranto in September 1943. Hopkinson is eulogised in Dover's "The Sky Generals", as being a "...man who lived at a pace faster than time could hold".⁸³ That may have been, but a historian of the Italian campaign provides a rather different opinion. Speaking of Hopkinson's successful lobbying for 1st Airlanding Brigade's night operation in Sicily, Eric Morris claims that:

"In truth, Hopkinson had let his enthusiasm override his common sense. He was a classic example of a commanding officer who posed a greater threat to his men than did the enemy; there is no place in the modern battlefield for the

overgrown boy scout, but the Second World War is littered with men of his ilk".⁸⁴

The fact that 1st Airlanding Brigade's operation to seize the Ponte Grande bridge near Syracuse was a fiasco,⁸⁵ and the manner in which Hopkinson was killed suggest that Morris may not be so very wide of the mark.

Be that as it may, however, the most salient theme in the establishment of a British airborne force was neither luck, nor the way in which the airborne arm and infrastructure became absorbed into the respective services, but the often skilfully disguised intransigence of the RAF. It would be convenient to regard this as a monolithic example of inter-service rivalry, but unfortunately the evidence does not support such a contention. Indeed, had that been the case then it is unlikely that the airborne project would have got off the ground literally or metaphorically, for RAF personnel played a crucial role in that process. In fact, the RAF attitude toward the airborne project was multi-faceted, and ranged from deliberate obstructionism, through institutional hostility carried over from the RAF's earliest days as an independent service, to plain bureaucratic indifference and incompetence.

There can be little doubt that some deliberate obstructionism occurred. The Air Ministry's internal reaction to Churchill's original parachute directive clearly ran deep, and the unremitting hostility of Arthur Harris to the airborne project makes it highly likely that the bombing lobby within the Air Ministry was the seat of it. This would explain why it was invariably the effect upon bomber operations and bomber production that were cited as evidence for curtailing the airborne project, rather than any other aspect of the RAF's activities. In fairness, it has to be acknowledged that this was not motivated by hostility to the airborne idea *per se*, but by opposition to the transfer of resources away from the bombing effort. It should also be noted that these fears were subsequently justified to some extent, although ironically not because of the airborne effort. Bomber Command was increasingly directed away from strategic bombing in the run up to the D-Day landings, and this tendency ultimately resulted in heavy bombers being co-opted for close-support work in Normandy.⁸⁶

More widespread was the intransigence bred by inter-service rivalry, not least as a result of the difficult circumstances of the inter-war period. Old habits die hard even in wartime, and the RAF's attitude was doubtless reinforced by the fact that it carried the brunt of the war between Dunkirk and D-Day, at least on the Home Front. Ironically, the third source of RAF intransigence was equally damaging to the RAF and the airborne effort.

Bureaucratic incompetence and indifference were probably responsible for many instances of what appear to be deliberate RAF obstructionism. The discovery of the serviceable Whitley rotting in the weather whilst the CLE struggled to keep their handful of worn-out aircraft serviceable is a case in point.

Of course, these traits were by no means the sole preserve of the RAF. Some within the Army's infantry arm doubtless viewed the formation of the airborne force as a needless diversion of effort as did Bomber Command: inter-service rivalry was a two-way process, and the Army's bureaucracy was probably no more efficient than that of the RAF. Nonetheless, the most crucial problem encountered in the establishment of the British airborne force lay with the RAF. This was the RAF's independent status, and more specifically, the lack of proper control systems to limit that status. The fact is that whilst Churchill and the Chiefs of Staff could order and recommend, there was no machinery to force the RAF to comply at any level and pace other than that chosen by the Air Ministry. Churchill himself unwittingly reinforced this, with his attempts to control matters personally despite his other commitments, and by his seemingly naïve belief that issuing directives automatically guaranteed compliance. Appointing someone of Amery's calibre to oversee the airborne project might have ameliorated the matter, but he would probably have been similarly hamstrung by the lack of enforcement machinery.

Achieving Air Ministry compliance was thus more of an exercise in politics than military command, and it had two major side effects. First, the process of establishing a British airborne force took far longer than it need or should have. To claim that the first year of the airborne effort was wasted may be overstating the case, but the fact remains that progress in that period was shaped by efforts to circumvent shortages in basic equipment, rather than genuine research and development problems. This is highlighted by the fact that over a full brigade of parachutists were trained in less time than it had previously taken to train an understrength battalion, once a modest increase in resources was secured after April 1941. The second side effect was that the horse-trading to gain Air Ministry compliance left the RAF with too much power over the operational deployment of the airborne force, the deleterious results of which we have seen in the above analysis of events at Arnhem. Consequently, in the long term a measure intended to harmonise inter-service co-operation actually had the opposite effect, and contributed in no small manner to the destruction of an entire division and the failure of a major strategic operation.

Notes

- ¹ see Otway, op cit., p. 42
- ² see Otway, p. 55. For a history of the provost company, see Jack Turnbull and John Hamblett, **The Pegasus Patrol**; for the pathfinder company, see Ron Kent, **First In**; and for the reconnaissance squadron see John Fairley, **Remember Arnhem**
- ³ see Otway, p. 54
- ⁴ Thompson, op cit., pp. 37, 72-73
- ⁵ see for example Saunders, op cit., p. 53
- ⁶ Parachute Regiment is routinely referred to as the "Maroon Machine" currently; the maroon or "red" beret has been adopted by a variety of airborne forces since 1945, including those of the US, France, Belgium, Italy, Portugal, Germany, Poland and Israel
- ⁷ see for example Gregor Ferguson, **The Paras**, pp. 8-9
- ⁸ Otway, pp. 65-70; for a detailed account see Millar, op cit.
- ⁹ Otway, p. 135
- ¹⁰ see for example Hickey, pp. 103-104
- ¹¹ *ibid.*, pp. 111-134
- ¹² *ibid.*, pp. 94-95
- ¹³ Otway personally led the assault through a minefield, and was involved in the hand-to-hand fighting which followed. His account of the action in the official history modestly omits any mention of his personal involvement; see *ibid.*, pp. 180-181; for detailed accounts, see John Golley, **The Big Drop**; and Alan Jefferson, **Assault on the Guns of Merville**
- ¹⁴ Otway, pp. 296-322; for details of the Division's activities after the Rhine crossing, see for example John Russell, **No Triumphant Procession**
- ¹⁵ in addition to the 1st and 6th Airborne Divisions, by 1945 the British airborne force in Europe included the 2nd Independent Parachute Brigade Group, and the special operations oriented SAS Brigade. There was also the 44th Indian Airborne Division, built on the 50th Indian Parachute Brigade, in the Far East; see Otway, pp. 216-260, 331-353
- ¹⁶ see Tugwell, p. 24; and Otway, pp. 16-17
- ¹⁷ see Glantz, p. 44
- ¹⁸ *ibid.*, pp. 39-40
- ¹⁹ see MacDonald, pp. 39-40
- ²⁰ see Chapter Two above
- ²¹ see MacDonald, p. 40
- ²² *ibid.*, pp. 59-62
- ²³ for details see Lucas (**Storming Eagles**), pp. 69-75; and MacDonald, pp. 65-67
- ²⁴ for a brief account, see Lucas (**Storming Eagles**); for detailed coverage see MacDonald

-
- ²⁵ figures from MacDonald, p. 301
- ²⁶ see Otway, p. 12
- ²⁷ quoted from MacDonald, p. 301
- ²⁸ for details, see Lucas (Storming Eagles), pp. 198-211, 246-277, 278-300
- ²⁹ see Otway, pp. 17-20; and Hickey, pp. 133-135
- ³⁰ for a detailed and well researched account of the US airborne effort, see Gerard M. Devlin, **Paratrooper! The Saga of US Army and Marine Parachute and Glider Combat Troops During World War II**; for a concise history and organisational details, see Gordon Rottman, **US Army Airborne, 1940-90**
- ³¹ see Devlin, pp. 80-81
- ³² see Martin Middlebrook, **Arnhem: The Airborne Battle**, p. 76
- ³³ quoted from Glantz, p. 289; for a very detailed account of these and lesser Soviet airborne operations, see *ibid.*, pp. 52, 70-288
- ³⁴ see *ibid.*, pp. 316-321
- ³⁵ quoted from MacDonald, p. 301
- ³⁶ for details see Lucas (Storming Eagles), pp. 69-75; and MacDonald, pp. 65-67
- ³⁷ for a detailed account of the Bruneval raid and the technical background, see George Millar, **The Bruneval Raid: Flashpoint of the Radar War**; for a brief account see for example Otway, pp. 65-70
- ³⁸ see Millar, p. 123
- ³⁹ airborne radios were problematic throughout the war; see Lewis Golden, **Echoes From Arnhem**
- ⁴⁰ see Millar, p. 180
- ⁴¹ see contemporary German report reproduced in Millar, pp. 183-186
- ⁴² for a detailed account of the first use of Window and the technical development, see Martin Middlebrook, **The Battle of Hamburg**, especially pp. 68-70, 125-129; see also Millar, pp. 187-193
- ⁴³ for well researched overviews of Market Garden, see Geoffrey Powell, **The Devil's Birthday: The Bridges to Arnhem 1944**, and Peter Harclerode, **Arnhem: A Tragedy of Errors**. Powell fought at Arnhem with 156 Battalion, The Parachute Regiment, where he won the Military Cross. Harclerode's more recent account (1994) concentrates on highlighting the difficulties faced by the relieving ground forces, in an attempt to refute the view widely held among the airborne that the ground forces could have tried harder to reach Arnhem
- ⁴⁴ the best overall account to date of 1st Airborne's battle at Arnhem is Middlebrook's **Arnhem: The Airborne Battle**. There are also a number of very illuminating participant accounts. See for example James Sims, **Arnhem Spearhead: A Private Soldier's Story**; John Fairley, **Remember Arnhem**; and Stuart Mawson, **Arnhem Doctor**
- ⁴⁵ quoted from Terraine (*Right of the Line*) *op cit.*, p. 669
- ⁴⁶ all figures quoted from Middlebrook (*Arnhem*), pp. 439-441
- ⁴⁷ in essence, British XXX Corps were obliged to conduct a contested armoured advance along a single elevated road through dead flat country, against a determined and well equipped defence consisting mainly of *Fallschirmjäger* and Waffen SS troops
- ⁴⁸ see Middlebrook (*Arnhem*), p. 76

-
- ⁴⁹ one of the 7th Battalion's officers was a Captain Richard Todd, who by an ironic twist played Major John Howard in the Hollywood recreation of the action at Bénouville in the film **The Longest Day**
- ⁵⁰ quoted from Thompson, p. 101
- ⁵¹ PIAT is an acronym for Projector, Infantry, Anti Tank, the spring-loaded British equivalent to the US Bazooka and German *Panzerfaust* and *Panzerschreck*
- ⁵² see Otway, p. 178; for a more detailed account of events at what was later christened "Pegasus Bridge", see Stephen Ambrose, **Pegasus Bridge, June 6 1944**
- ⁵³ see Otway, p. 181; and Thompson, pp. 126-127
- ⁵⁴ see Otway, p. 180; and Thompson, pp. 107-111
- ⁵⁵ see Margry, p. 29
- ⁵⁶ see Robert J. Kershaw, **"It Never Snows in September": The German View of Market-Garden and the Battle of Arnhem, September 1944**, p. 41
- ⁵⁷ see *id.*, **D-Day: Piercing the Atlantic Wall**, p. 90
- ⁵⁸ see for example Trevor Wilson, **The Myriad Faces of War**, pp. 455, 486-7
- ⁵⁹ quoted from Terraine (*Right of the Line*), p. 642
- ⁶⁰ see for example Sidney Jary, **18 Platoon**, p. 16
- ⁶¹ see for example Stephen Ambrose, **Band of Brothers**, p. 108
- ⁶² see David French, **Raising Churchill's Army**, especially Chapters 2 & 4
- ⁶³ see *ibid.*, pp. 78-79
- ⁶⁴ *ibid.*, pp. 67-68
- ⁶⁵ *ibid.*, pp. 70-71
- ⁶⁶ see Terraine (*Right of the Line*), pp. 278-279
- ⁶⁷ the Albemarle had a limited range and low carrying capacity, and was eventually shifted from parachuting to glider towing duties too; see Middlebrook, p. 44
- ⁶⁸ see Terraine's
- ⁶⁹ Otway, p. 51
- ⁷⁰ *ibid.*, p. 52
- ⁷¹ *ibid.*, p. 57
- ⁷² *ibid.*, p. 119
- ⁷³ see Middlebrook, p. 47
- ⁷⁴ see Otway, pp. 216-225
- ⁷⁵ see *ibid.*, pp. 225-227; and Thompson, pp. 205-211
- ⁷⁶ PRO AIR 32/3, doc. 42A, "Meeting AFE 18 November 1941", dated 18/11/1941
- ⁷⁷ Otway, p. 40
- ⁷⁸ PRO CAB 120/262, doc. 56B, paper "Equipment for Airborne Divisions", n.d., c.27/04/1942

⁷⁹ Otway, pp. 46-47

⁸⁰ Jeeps were accommodated on special cradles in the bomb-bays of Halifax bombers, and required four ninety-foot diameter parachute canopies each. The first operational use of the technique occurred on the night of 17/18 June 1944, when four Jeeps were delivered with other supplies to an SAS unit operating near Poitiers in western France: see Paul McCue, **SAS Operation Bulbasket**, pp. 46-49

⁸¹ details taken from "Summary of Service 33363 Lieutenant-Colonel John Frank Rock, Royal Engineers", compiled by Major J. R. Cross of the Museum of Army Flying. I am indebted to Dr John Rhodes, of the Royal Engineers Museum for providing me with a copy of this document

⁸² Dover, *op. cit.*, p. 120

⁸³ *ibid.*, p. 82

⁸⁴ quoted from Eric Morris, **Circles of Hell**, p. 58

⁸⁵ for details see Otway, pp. 120-124

⁸⁶ for details see Ian Gooderson, **Air Power at the Battle Front**, pp. 125-160

Glossary

- ACAS(T) (RAF):** Assistant Chief of Air Staff (Training)
- AFE:** Airborne Forces Establishment
- AFEE:** Airborne Forces Experimental Establishment
- AG (Army):** Adjutant General
- ATC:** Army Training Centre (Hardwick Hall)
- AM:** Air Ministry
- AMDI (RAF):** Air Ministry Director of Intelligence
- DoR (RAF):** Air Ministry Director of Research
- AMSO (RAF):** Air Ministry Staff Officer
- BEF:** British Expeditionary Force
- CAS (RAF):** Chief of Air Staff
- CAS(T) (RAF):** Chief of Air Staff (Training)
- CIGS (Army):** Chief of Imperial General Staff
- CLE:** Central Landing Establishment
- CLS:** Central Landing School
- CoS:** Chiefs of Staff
- DCAS (RAF):** Deputy Chief of Air Staff
- DCO:** Director Combined Operations
- DDCO:** Deputy Director Combined Operations
- DFC:** Distinguished Flying Cross
- DMC (RAF):** Director of Military Co-operation
- DMO&P (Army):** Director Military Operations & Planning
- DMT (Army):** Director Military Training
- DoP (RAF):** Director of Plans
- DRO (Army):** Director Recruiting & Organisation
- DSO:** Distinguished Service Order
- DZ:** Drop Zone
- GoC:** General Officer Commanding
- GS(R):** General Staff (Research)
- GTS:** Glider Training School/Squadron
- HALO:** High Altitude Low Opening
- ISTDC:** Inter Service Development & Training Centre
- Luftwaffe:** German Air Force since 1933
- LZ:** Landing Zone
- MAP:** Ministry of Aircraft Production
- MC:** Military Cross
- MI(R):** Military Intelligence (Research)
- MTP (Army):** Military Training Pamphlet
- MU (RAF):** Maintenance Unit
- OTU (RAF):** Operational Training Unit
- PDF (RAF):** Parachute Development Flight
- PISM:** Polish Institute & Sikorski Museum
- PRO:** Public Record Office
- PTC:** Parachute Training Centre
- PTS:** Parachute Training School/Squadron
- RAE:** Royal Aircraft Establishment
- RAF:** Royal Air Force
- RAMC:** Royal Army Medical Corps
- RASC (Army):** Royal Army Service Corps
- RE:** Royal Engineers
- RFC:** Royal Flying Corps
- Rip-Cord:** manual device for deploying parachute canopy
- RNAS:** Royal Naval Air Service
- RTR (Army):** Royal Tank Regiment
- SOE:** Special Operations Executive
- Static Line:** strap or cord linking parachute to the aircraft, permitting automatic opening
- USAAF:** United States Army Air Force
- USMC:** United States Marine Corps
- WE (Army):** War Establishment
- WO:** War Office

Bibliography

Unpublished Sources

Public Record Office Files

AIR Files:

AIR 2/3897: 1938 – Formation of Parachute Troops in Germany: Report from British Air Attaché, Berlin

AIR 2/4586: 1940 – 1941 Parachute Training Centre: Formation

AIR 2/7239: 1940 – 1942 Airborne Forces: Organisation

AIR 2/7338: 1940 – 1941 Airborne Forces: Provision of Aircraft and Gliders - Policy

AIR 2/7470: 1940 – 1943 Airborne Forces: Preparation of Papers for Chiefs of Staff

AIR 2/7574: 1941 Parachute Troops: Training

AIR 29/512: 1940 July – 1944 July: Central Landing School, Ringway, later Central Landing Establishment, Airborne Forces Establishment, later AFEE, Sherburn in Elmet (Operational Record Books)

AIR 32/2: Provision of an Airborne Force

AIR 32/3: Provision of an Airborne Force: Part II

AIR 32/4: 1941 April – 1942 February Role and Use of Parachute Troops

AIR 39/4: 1941 Feb-Nov Formation of Central landing Establishment, RAF Ringway

AIR 39/7: 1941 May – 1942 Jan: Parachute Training Squadron

AIR 39/52: 1941 Nov – 1942 Aug Airborne Forces – Role and Tactics – Investigation and Development of Glider Tactics

Cabinet (CAB) Files:**CAB 120/10: Prime Minister's Directives****CAB 120/262: 1940 June – 1946 November: Airborne Forces****War Office (WO) Files:****WO 32/4723: Badges for Paratroops****WO 32/9778: 1940 – 1943 Airborne Forces: Policy and Requirements****WO 190/811: 1939 May 19 – Note Parachute Units in German Defence Forces****WO 193/27: 1940 Jun – 1941 Jan Formation of Parachute and Glider Units****WO 193/38: 1941 Jan – Dec: Role of Polish Military Personnel in Allied Forces****WO 193/384: Combined Operations 2: Independent Companies 20 June 1940 – December 1940****Polish Institute and Sikorski Museum Archive Files****AV20/3****AV20/4****Theses****Crang, Jeremy, A Social History of the British Army 1939-45 (Ph.D. Thesis, University of Edinburgh, 1992)****Harrison Place, Timothy, Tactical Doctrine and Training in the Infantry and Armoured Arms of the British Army, 1940-1944 (Ph.D. Thesis, University of Leeds, 1997)****Massam, David, British Maritime Strategy and Amphibious Capability, 1900-1940 (Ph.D. Thesis, Oxford University, 1995)**

Published Sources

Official Publications

Chatham, **The History of the Corps of Royal Engineers** (Chatham: The Institution of Royal Engineers, 1951)

Great Britain, Air Ministry, **RAF Airborne Forces Manual: The Official Air Publication 3231, 1951** (London: Arms and Armour Press, 1979)

Otway, Lieutenant-Colonel T. B. H., DSO, **The Second World War 1939-1945 Army: Airborne Forces** (London: War Office, 1950: facsimile Imperial War Museum, 1990)

Parliamentary Debates, 5th Series, CCCLXI, 4 June 1940

War Office, **By Air to Battle: The Official Account of the British Airborne Divisions** (London: HMSO, 1945: reprint Cambridge: Patrick Stephens, 1978))

War Office, **Airborne/Airtransported Operations No. 4: Army/Air Operations Pamphlet No. 4** (London: War Office, 1945)

Other Published Works

Allen, Louis, **Burma: the Longest War 1941-1945** (London: Dent, 1986)

Ambrose, Stephen, **Pegasus Bridge, 6 June 1944** (London: Pocket Books, 1994)

Arthur, Max, **Men of the Red Beret: British Airborne Forces 1940-1990** (London: Hutchinson, 1990)

Asher, Michael, **Shoot To Kill: A Soldier's Journey Through Violence** (London: Penguin, 1991)

Barnes, C. H., **Handley Page Aircraft Since 1907** (London: Putnam, 1976)

Beachey, Ray, **The Warrior Mullah: The Horn Aflame 1892-1920** (London: Bellew Publishing, 1990)

Bekker, Cajus, **The Luftwaffe War Diaries** (New York: MacDonald, 1966)

- Bialer, Uri, **The Shadow of the Bomber: The Fear of Air Attack and British Politics 1932-1939** (London: Royal Historical Society, 1980)
- Blunt, Vernon, **The Use of Airpower** (London: Thorsons, 1942)
- Bond, Brian, **British Military Policy Between the Two World Wars** (Oxford: Clarendon Press, 1980)
- Id. (Ed), **Chief of Staff: The Diaries of Lieutenant-General Sir Henry Pownall, Volume One: 1933-1940** (London: Leo Cooper, 1972)
- Id., **Victorian Military Campaigns** (London: Tom Donovan, 1994)
- Id., "Doctrine and Training in the British Cavalry, 1870-1914", in Michael Howard (Ed), **The Theory and Practice of War** (London: Cassell, 1965)
- Bryant, Arthur, **Jackets of Green: A Study of the History, Philosophy and Character of the Rifle Brigade** (London: Collins, 1972)
- Id., **The Turn of the Tide: A Study based on the Diaries and Autobiographical Notes of Field Marshal The Viscount Alanbrooke** (London: Collins, 1957)
- Cholewczynski, George F., **Poles Apart: The Polish Airborne at the Battle of Arnhem** (London: Greenhill Books, 1993)
- Clark, Alan, **The Donkeys** (London: Hutchinson, 1961)
- Cole, Christopher (Ed), **Royal Air Force Communiqués 1918** (London: Tom Donovan, 1990)
- Connell, John, **Wavell: Soldier and Scholar** (London: Collins, 1964)
- Cooper, Malcolm, **The Birth of Independent Air Power: British Air Policy in the First World War** (London: Allen & Unwin, 1986)
- Coox, Alvin D., **Nomonhan: Japan Against Russia, 1939** (Stanford: California University Press, 1990)

- Cuneo, John R., **Winged Mars, Volume II** (Harrisburg: Military Publishing Co., 1947)
- Curtis, Reg, **Churchill's Volunteer: A Parachute Corporal's Story** (London: Avon Books, 1994)
- Davis, Brian L., **British Army Uniforms & Insignia of World War Two** (London: Arms & Armour, 1992)
- D'Este, Carlo, **Decision In Normandy: The Unwritten Story of Montgomery and the Allied Campaign** (London: Collins, 1983)
- Devlin, Gerard M., **Paratrooper! The Saga of US Army and Marine Parachute and Glider Troops during World War II** (New York: St. Martin's Press, 1979)
- Dixon, Norman, **On the Psychology of Military Incompetence** (London: Futura, 1985)
- Dover, Major Victor MC, **The Parachute Generals** (London: Cassell, 1981)
- Edgerton, David, **England and the Aeroplane: An Essay on a Militant and Technological Nation** (Basingstoke: Macmillan Academic and Professional Ltd., 1991)
- Ellis, Major L. F., CVO, CBE, DSO, MC, **The War In France and Flanders 1939-1940** (London: HMSO, 1953)
- Ellis, John, **The Sharp End: The Fighting Man in World War II** (London: Pimlico, 1993)
- Fairley, John, **Remember Arnhem: The Story of the 1st Airborne Reconnaissance Squadron at Arnhem** (Bearsden: Peaton Press, 1978)
- Fall, Bernard B., **Hell in a Very Small Place: The Siege of Dien Bien Phu** (New York: Da Capo Press, 1985)
- Ferguson, Gregor, **The Paras: British Airborne Forces 1940-1984** (London: Osprey, 1984)
- Foot, M. R. D., **SOE in France: An Account of the Work of the British Special Operations Executive in France, 1940-1944** (London: HMSO, 1966)

Forty, George, **World War Two Tanks** (London: Osprey Automotive, 1996)

Foxall, Raymond, **The Guinea Pigs: Britain's First Paratroop Raid** (London: Hale, 1983)

Franks, Norman, **The Air Battle of Dunkirk** (London: Kimber, 1983)

Fraser, David, **Alanbrooke** (London: Harper Collins, 1997)

Id., **And We Shall Shock Them: The British Army in the Second World War** (London: Hodder & Stoughton, 1983)

French, David, **Raising Churchill's Army: The British Army and the War Against Germany 1919-1945** (Oxford: Oxford University Press, 2000)

Fuller, J. F. C., **Lectures on FSR III (Operations Between Mechanised Forces)** (London: Sifton Praed, 1932)

Id., **The Army In My Time** (London: Rich & Crown, 1935)

Gale, General Sir Richard, **Call To Arms: An Autobiography** (London: Hutchinson, 1968)

Garlinski, Jozef, **Poland, SOE and the Allies** (London: Allen & Unwin, 1969)

Gates, David, **The British Light Infantry Arm c.1790-1815** (London: Batsford, 1987)

Geraghty, Tony, **Who Dares Wins: The Story of the Special Air Service, 1950-1980** (London: Arms & Armour, 1980)

Gilbert, Martin, **The Churchill War Papers: Volume II: Never Surrender, May 1940-December 1940** (London: Heinemann, 1994)

Id., **Winston S. Churchill, Volume VI: Finest Hour, 1939-1941** (London: Heinemann, 1983)

Glantz, David M., **The History of Soviet Airborne Forces** (Essex: Frank Cass, 1994)

Golley, John, **The Big Drop: The Guns of Merville, June 1944** (London: Jane's, 1982)

Gooderson, Ian, **Air Power at the Battlefield: Allied Close Air Support in Europe 1943-45** (London: Frank Cass, 1998)

Gottman, Jean, "Bugeaud, Gallieni, Lyautey: The Development of French Colonial Warfare", in Edward Meade Earle (Ed), **The Makers of Modern Strategy: Military Thought from Machiavelli to Hitler** (Princeton: Princeton University press, 1943)

Grant, Roderick and Christopher Cole, **But Not In Anger: The RAF in the Transport Role** (London: Ian Allan, 1979)

Gudmundsson, Bruce I., **Storm Tactics: Innovation in the German Army, 1914-1918** (New York: Praeger, 1989)

Harclerode, Peter, **"Go To It": The Illustrated History of the 6th Airborne Division** (London: Bloomsbury, 1990)

Id., **Arnhem: A Tragedy of Errors** (London: Caxton, 2000)

Harris, J. P., **Men, Ideas and Tanks: British Military Thought and Armoured Forces, 1903-1939** (Manchester: Manchester University Press, 1995)

Hastings, Max, **Overlord: D-Day and the Battle for Normandy** (London: Pan, 1985)

Hearn, Peter, **Flying Rebel: The Story of Louis Strange** (London: HMSO, 1994)

Id., **Sky High Irvin: The Story of a Parachute Pioneer** (London: Robert Hale, 1983)

Hickey, Michael, **Out of the Sky: A History of Airborne Warfare** (London: Mills & Boon, 1979)

Hinsley, F. H., **British Intelligence in the Second World War: Its Influences on Strategy and Operations, Volume I** (London: HMSO, 1979)

Hogg, Ian and Rob Adam, **Jane's Guns Recognition Guide** (Glasgow: Harper Collins, 1996)

Holmes, Richard, **Firing Line** (London: Penguin, 1987)

Horne, Alistair, **To Lose A Battle: France 1940** (London: Papermac, 1990)

Id., **The Price of Glory: Verdun 1916** (London: Penguin, 1962)

Jackson, A. S., **De Havilland Aircraft Since 1909** (London: Putnam, 1962)

Jackson, Bill and Dwin Bramall, **The Chiefs: The Story of the United Kingdom Chiefs of Staff** (London: Brassey's, 1992)

Jary, Sydney, **18 Platoon** (Bristol: Sydney Jary Ltd., 1994)

Jefferson, Alan, **Assault on the Guns of Merville: D Day and After** (London: Murray, 1987)

Johnson, Franklyn Arthur, **Defence by Committee: The British Committee of Imperial Defence 1885-1959** (London: Oxford University Press, 1960)

Junger, Ernst, **The Storm of Steel: From the Diary of a German Storm-Troop Officer on the Western Front** (New York: H. Fertig, 1929)

Kennedy, Captain J. R., MC, RA, (ret'd) **This, Our Army** (London: Hutchinson, 1935)

Kennedy, John, **The Business of War: The War Narrative of Major-General Sir John Kennedy** (London: Hutchinson, 1957)

Kennett, Lee, **The First Air War 1914-1918** (New York: The Free Press, 1991)

Kent, Ron, **First In! Parachute Pathfinder Company: A History of the 21st Independent** (London: Batsford, 1979)

Kershaw, Robert J., **"It Never Snows In September": The German View of MARKET-GARDEN and The Battle of Arnhem, September 1944** (Marlborough: Crowood Press, 1990)

Id., **D-Day: Piercing the Atlantic Wall** (London: Ian Allan, 1993)

- Kilduff, Peter, **Germany's First Air Force** (London: Arms & Armour Press, 1991)
- Ladd, James D., **Commandos and Rangers of World War II** (London: BCA, 1978)
- Laffin, John, **British Butchers and Bunglers of World War One** (Stroud: Alan Sutton, 1988)
- Lamb, Richard, **Montgomery in Europe 1943-1945: Success or Failure** (London: Buchan & Enright, 1983)
- Landau, Alan M. and Frieda W. Landau, **Airborne Rangers** (Wisconsin: Motor Books International, 1992)
- Layman, R. D., **Naval Aviation in the First World War: Its Impact and Influence** (London: Chatham Publishing, 1996)
- Id., **The British Way in Warfare: Adaptability and Mobility** (Harmondsworth: Penguin, 1942)
- Id., "[The Next Ten Years] In Warfare", in **The Spectator Booklet II: The Next Ten Years** (London: Methuen, 1934)
- Id., **The Future of Infantry** (London: Faber & Faber, 1933)
- Id., **Paris: Or, The Future of War** (London: Kegan Paul, 1925)
- Liddle, Peter H., **The 1916 Battle of the Somme: A Reappraisal** (London: Leo Cooper, 1992)
- Lucas, James and Matthew Cooper, **Hitler's Elite: Leibstandarte SS 1933-45** (London: MacDonald, 1975)
- Lucas, James, **Storming Eagles: German Airborne Forces in World War Two** (London: Grafton, 1990)
- Id., **Kommando: German Special Forces of World War Two** (London: Grafton, 1986)
- MacDonald, Callum, **The Lost Battle: Crete 1941** (London: Papermac, 1995)

- McManners, Hugh, **The Scars of War** (London: Harper Collins, 1993)
- Mackenzie, S. P., **The Home Guard: A Military and Political History** (Oxford: Oxford University Press, 1995)
- Martel, Lieutenant-General Sir Giffard, **An Outspoken Soldier: His Views and Memoirs** (London: Sifton Praed, 1949)
- Mason, Francis K., **The British Bomber Since 1914** (Annapolis: Navy Institute Press, 1994)
- Mawson, Stuart, **Arnhem Doctor** (Staplehurst: Spellmount, 2000)
- McCue, Paul, **Operation Bulbasket: Behind the Lines in Occupied France, 1944** (London: Leo Cooper, 1996)
- McLeod, Colonel Roderick and Dennis Kelly (Eds), **The Ironside Diaries 1937-1940** (London: Constable 1962)
- Messenger, Charles, **The Art of Blitzkrieg** (Surrey: Ian Allan, 1991)
- Id., **The Commandos 1940-1946** (London: Kimber, 1985)
- Middlebrook, Martin, **Arnhem 1944: The Airborne Battle** (London: Viking, 1994)
- Id., **Task Force: The Falklands War, 1982** (London: Penguin, 1987)
- Miksche, F. O., **Paratroops: The History, Organisation and Tactical Use of Airborne Formations** (London: Faber, 1943)
- Militärgeschichtliches Forschungsamt, Freiburg (Eds), **Germany and the Second World War, Volume II: Germany's Initial Conquests in Europe** (Oxford: Clarendon Press, 1991)
- Millar, George, **The Bruneval Raid: Flashpoint of the Radar War** (London: Bodley Head, 1974)
- Morris, Eric, **Circles of Hell: The War in Italy 1943-1945** (London: Hutchinson, 1993)

Morrow, John H. Jr., **The Great War in the Air: Military Aviation from 1909 to 1921** (London: Smithsonian Institute Press, 1993)

Id., **German Air Power in World War I** (London: University of Nebraska Press, 1982)

Mrazek, James, **The Fall of Eben Emael: Prelude to Dunkirk** (London: Hale, 1972)

Murray, Williamson and Allan R. Millett, **A War To Be Won: Fighting the Second World War** (London: The Belknap Press, 2000)

Newnham, Maurice, **Prelude to Glory: The Story of the Creation of Britain's Parachute Army** (London: Sampson Low, 1948)

Omissi, David, **Air Power and Colonial Control: The Royal Air Force, 1919-1939** (Manchester: Manchester University Press, 1990)

Powell, Geoffrey, **The Devil's Birthday: The Bridges to Arnhem 1944** (London: Leo Cooper, 1992)

Quarrie, Bruce, **Airborne Assault: Parachute Forces in Action 1940-1991** (Sparkford: Patrick Stephens, 1991)

Id., **German Airborne Troops 1939-1945** (London: Osprey, 1983)

Raleigh, Sir Walter and H. A. Jones, **The War in the Air, Volume VI** (Oxford: Clarendon Press, 1935)

Regan, Geoffrey, **Someone Had Blundered** (London: Batsford, 1987)

Id., **The Guinness Book of Military Blunders** (London: Guinness, 1991)

Reynolds, David, **Paras: An Illustrated History of Britain's Airborne Forces** (Stroud: Sutton Publishing, 1998)

Reynolds, Michael, **Steel Inferno: 1 SS Panzer Corps in Normandy** (Staplehurst: Spellmount, 1997)

Rezun, Miron, *Intrigue and War in Southwest Asia: The Struggle for Supremacy from Central Asia to Iraq* (London: Praeger, 1992)

Rottman, Gordon, *US Army Airborne 1940-90* (London: Osprey, 1990)

Rowan-Robinson, Major-General H., *Imperial Defence: A Problem in Four Dimensions* (London: Frederick Muller, 1938)

Rowan-Robinson, Major-General H., *Security? A Study of Our Military Position* (London: Methuen, 1935)

Rowan-Robinson, Major-General H., *The Infantry Experiment* (London: William Clowes, 1934)

Rowan-Robinson, Major-General H., *Some Aspects of Mechanisation* (London: William Clowes, 1923)

Russell, John with R. De Normann, *No Triumphant Procession: The Forgotten Battles of April 1945* (London: Arms and Armour, 1994)

Samuels, Martin, *Doctrine and Dogma: German and British Infantry Tactics in the First World War* (Westport, Connecticut: Greenwood Press, 1992)

Saunders, Hilary St. George, *The Red Beret: The Story of the Parachute Regiment at War 1940-1945* (London: Michael Joseph, 1950)

Scott, H. F. and W. F. Scott (Eds), *The Soviet Art of War: Doctrine, Strategy and Tactics* (Boulder: Westview Press, 1982)

Sempill, The Master of, "[The Next Ten Years] In Aviation" in *The Spectator Booklet II: The Next Ten Years* (London: Methuen, 1934)

Shannon, Kevin, *One Night in June: The Story of Operation Tonga, the Initial Phase of the invasion of Normandy, 1944* (Shrewsbury: Airlife, 1994)

Shortt, James G., *Uniforms Illustrated No. 10: The Paras: The British Parachute Regiment* (London: Arms & Armour, 1985)

- Simpkin, Richard, **Deep Battle: The Brainchild of Marshal Tukhachevskii** (London: Brassey's, 1987)
- Sims, James, **Arnhem Spearhead: A Private Soldier's Story** (London: Imperial War Museum, 1978)
- Slessor, Sir John, GCB, DSO, MC, **The Central Blue** (London: Cassell, 1956)
- Smith, Claude, **The History of the Glider Pilot Regiment** (London: Leo Cooper, 1992)
- Smith, Malcolm, **British Air Strategy between the Wars** (Oxford: Clarendon Press, 1984)
- Sosabowski, Stanislaw, **Freely I Served** (London: Kimber, 1960)
- Terraine, John, **The Right of the Line: The Royal Air Force in the European War 1939-1945** (London: Sceptre, 1988)
- Id., **White Heat: The New Warfare 1914-18** (London: Book Club Associates, 1982)
- "The Counter-Raiders", **Blackwood Tales from the Outposts III: Tales of the Border** (London: William Blackwood & Son, 1934)
- Thetford, Owen, **Aircraft of the Royal Air Force Since 1918** (London: Putnam, 1979)
- Thompson, Julian, **Ready for Anything: The Parachute Regiment at War, 1940-1982** (London: Weidenfeld and Nicolson, 1989)
- Towle, Philip, **Pilots and Rebels: The Use of Aircraft in Unconventional Warfare, 1918-1988** (London: Brassey's, 1989)
- Townshend, C., "Civilisation and Frightfulness: Air Control in the Middle East Between the Wars", in Chris Wrigley (Ed), **Warfare, Diplomacy and Politics** (London: Hamish Hamilton, 1986)
- Travers, Tim, **The Killing Ground: The British Army, the Western Front and the Emergence of Modern Warfare, 1900-1918** (London: Allen and Unwin, 1987)

Tugwell, Maurice, **Airborne To Battle: A History of Airborne Warfare 1918-1971** (London: Kimber, 1971)

Turnbull, Jack and John Hamblett, **The Pegasus Patrol** (Marple: Jack Turnbull, 1994)

Turnbull, Patrick, **Dunkirk: Anatomy of a Disaster** (London: Batsford, 1978)

Ward, Harry with Peter Hearn, **The Yorkshire Birdman: Memoirs of a Pioneer Parachutist** (London: Robert Hale, 1990)

Warner, Philip, "Auchinleck", in John Keegan (Ed), **Churchill's Generals** (London: Weidenfeld and Nicolson, 1991)

Wiggan, Richard, **Operation Freshman: The Rjukan Heavy Water Raid 1942** (London: Kimber, 1986)

Winton, Harold R., **To Change An Army: General Sir John Burnett-Stuart and British Armoured Doctrine, 1927-1938** (Kansas: University of Kansas press, 1988)

Wilson, Trevor, **The Myriad Faces of War: Britain and the Great War, 1914-1918** (London: Polity Press, 1986)

Wolff, Leon, **In Flanders Fields** (London: Longmans Green, 1959)

Wood, Derek and Derek Dempster, **The Narrow Margin: The Battle of Britain and the Rise of Air Power 1930-1940** (London: Arrow, 1969)

Wright, Lawrence, **The Wooden Sword: The Untold Story of the Gliders in World War II** (London: Elek, 1967)

Wynn, Humphrey and the Air Historical Branch (RAF), Ministry of Defence, **Forged in War: A History of RAF Transport Command 1943-1967** (London: HMSO, 1996)

Zeidler, Manfred, **Reichswehr und Röte Armee 1920-1933: Wege und Stationen einer ungewöhnlichen Zusammenarbeit** (Oldenbourg: Beitrage zur Militärgeschichte, 1994)

Articles and Essays

Algazin, A., "Aviatsiia v reide MMC", *Vestnik Vozdushnovo Flota* No. 10-11, 1931

- Barbarski, Krzysztof, "1st Polish Independent Parachute Brigade, 1941-47 (1)" **Military Illustrated Past and Present**, No. 12, April/May 1988
- Barthorp, Michael, "The Mountain Gun", **Military Illustrated Past and Present**, No. 78, November 1994
- Bassett, Lieutenant-Colonel James A., "Past Airborne Employment", **Journal of Military History**, Volume 12 No. 4 (Winter 1948)
- Borisov, A., "*Desant* onto the Sand in Aircraft", *Vestnik Vozdushnovo Flota* (January 1929)
- Broad, Captain H. S., "If It Happened To-day! War From The Air", **The Army, Navy and Air Force Gazette**, Volume LXXVII (30 July 1936)
- Campbell, John P., "Facing the German Airborne Threat to the United Kingdom, 1939-1942", **War In History**, Volume 4, No. 4 (1997)
- Cox, Jafna L., "A Splendid Training Ground: The Importance to the Royal Air Force of its Role in Iraq, 1919-32", **The Journal of Imperial and Commonwealth History**, Volume 13 No. 1 (October 1984)
- Dean, D. J., "Air Power In Small Wars: The British Air Control Experience", **Air University Review**, Volume 34 No. 5 (1983)
- Decurion, "The Recruiting Problems of the British Army", **The Army Quarterly**, Volume 33
- Di Nardo, R. L., "German Armour Doctrine: Correcting the Myths", **War In History**, Volume 3, No. 4 (1996)
- Fletcher, David, "Steam Sappers: Steam Engines in the Boer War", **Military Illustrated Past and Present**, No. 47, July 1994
- Fuller, Major-General J. F. C., "Our Recruiting Problem, and a Solution", **The Army Quarterly**, Volume 33

Fuller, Major-General J. F. C., "Airpower: The Keystone in our Defence Problem", **The Army, Navy and Air Force Gazette**, Volume LXXVII (10 September 1936)

Gat, Azar, "The Hidden Sources of Liddell Hart's Strategic Ideas", **War In History**, Volume 3, (1996)

Godfrey, Major J. T., "Winged Armies", **The RUSI Journal** (August 1935)

LVSBS, "Three Infantries Not One Infantry", **The Army, Navy and Air Force Gazette**, Volume LXXVII (14 May 1936)

MacLennan, I. A. M., "Recruiting Stagnation: A Younger View", **The Army Quarterly**, Volume 33

MacNamara, Captain J. R. J., MP, "Army Methods of Training: Approach of the Modern Reorganised Infantry Toward the Enemy", **The United Services Review** (26 August 1937)

Margry, Karel, "Tragino 1941: Britain's First Paratroop Raid", **After the Battle**, No. 81, 1993

Minov, L., "Obuchenie Parashiotnum Prizkham", *Vestnik Vozdushnovo Flota* No. 2, 1931

Moreman, T. R., "The British and Indian Armies and North-West Frontier Warfare, 1846-1914", **Journal of Imperial and Commonwealth Studies**, Volume 20 No. 1 (1992)

Ramanichev, Colonel N., "The Development of the Theory and Practice of the Combat Use of Airlanding Forces in the Inter-War Period", **Military-History Journal**, No. 10 (October 1982) (Russian language publication)

Rowan-Robinson, Major general H., "Air Infantry: How Can This development Assist Great Britain?", **The United Services Review**, (17 December 1936)

Ryan, W. Michael, "The Influence of the Imperial Frontier on British Doctrines of Mechanised Warfare", **Albion**, Volume 15, No. 2 (1983)

Seton Hutchinson, Lieutenant-Colonel Graham, "The Army of Tomorrow: How to Make it a Corps D'elite", **The Army Quarterly**, Volume 30

Id., "Recruiting: The Real Problem and Its Solution", **The Army Quarterly**, Volume 33

Spiers, Edward M., "The British Cavalry, 1902-1914", **Journal of the Society for Army Historical Research**, Volume 57 (1979)

Stevens, Andrew and Peter Amodio, "British Airborne Forces, 1940-42", **Military Illustrated Past and Present**, No. 54 (November 1992)

Storey, Edward, "1st Canadian Parachute Battalion, 1942-45 (1)" **Military Illustrated Past and Present**, No. 48, May 1992

Telfer, Captain R. L., "The Army of Today", **The Army Quarterly**, Volume 30

Thorburn, Captain R. G., "The Operation in South Kurdistan, March–May 1923", **The Army Quarterly**, Volume 31 (October 1935-January 1936)

Wilberforce, Lieutenant-Colonel W., DSO, MC, "The Infantry of the Future", **The United Services Review** (22 April 1937)

Wilson, Trevor and Robin Prior, "Summing Up the Somme", **History Today**, Volume 41, (November 1991), pp. 37-43

Periodicals and Newspapers

The Army, Navy and Air Force Gazette

"Notes of the Week", Volume LXXVII (March 12 1936)

"Soviet Film of Kiev Manoeuvres", Volume LXXVII (September 17 1936)

The Army Quarterly

"The New Warrior", January 1934

The United Services Review

"Notes of the Week", (10 December 1936)

"Notes of the Week", (16 June 1938)

“Wings of the German Air Force” (Photo essay), (13 October 1938)

“Empire Day Thrills” (Photo essay), (10 June 1937)

The Sheffield Telegraph and Independent, as footnoted

The Times, as footnoted

