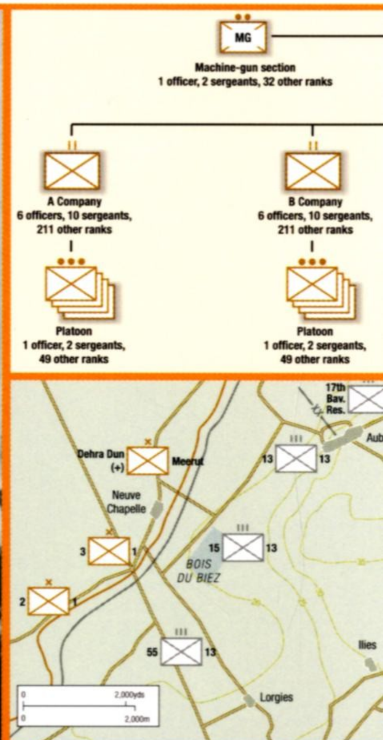
Battle Orders

OSPREY
PUBLISHING

The British Expeditionary Force 1914–15



Bruce Gudmundsson • *Consultant editor Dr Duncan Anderson*

First published in 2005 by Osprey Publishing
Midland House, West Way, Botley, Oxford OX2 0PH, UK
443 Park Avenue South, New York, NY 10016, USA
E-mail: info@ospreypublishing.com

© 2005 Osprey Publishing Limited

All rights reserved. Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright, Designs and Patents Act, 1988, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, electrical, chemical, mechanical, optical, photocopying, recording or otherwise, without the prior written permission of the copyright owner. Enquiries should be addressed to the Publishers.

A CIP catalogue record for this book is available from the British Library

ISBN 1 84176 902 9

CONSULTANT EDITOR: Duncan Anderson

Page layouts by Boundford.com, Royston, UK
Index by Alan Thatcher
Maps by Boundford.com, Royston, UK
Originated by The Electronic Page Company, Cwmbran, UK
Printed in China through Bookbuilders Ltd.

05 06 07 08 09 10 9 8 7 6 5 4 3 2 1

FOR A CATALOGUE OF ALL BOOKS PUBLISHED BY OSPREY MILITARY AND AVIATION PLEASE CONTACT:
NORTH AMERICA
Osprey Direct, 2427 Bond Street, University Park, IL 60466, USA
E-mail: info@ospreydirectusa.com

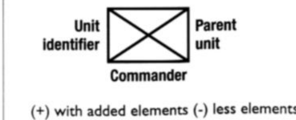
ALL OTHER REGIONS
Osprey Direct UK, P.O. Box 140 Wellingborough, Northants, NN8 2FA, UK
E-mail: info@ospreydirect.co.uk

www.ospreypublishing.com

Key to military symbols

Cavalry division / Mounted division
Cavalry brigade / Mounted brigade
Cavalry regiment / Yeomanry regiment
Cavalry squadron / Yeomanry squadron
Cavalry troop / Yeomanry troop
Ammunition column (Mechanical)
Transport company (Mechanical)
Infantry division
Infantry brigade
Infantry battalion
Infantry company
Infantry platoon
Ammunition column (Horse Transport)
Transport company (Horse Transport)
Army corps
Divisional artillery
Artillery brigade
Artillery battery
Artillery section
Machine-gun section (cavalry)
Army
Aeroplane squadron
Pioneer battalion
Field company, RE / Field squadron, RE
Anti-aircraft detachment
General headquarters
Royal Flying Corps
Mounted infantry battalion
Cyclist company
Machine-gun section (infantry)

Key to unit identification



(+) with added elements (-) less elements

Contents

Introduction 4

Mission 7
Growth of the Expeditionary Force

Doctrine and training 15
Mobilization • Role of reservists

Unit organization 20
Infantry battalions • Artillery batteries • Engineer companies
The cavalry regiment • Brigades • Divisions • Logistics units

Command, control, communications and intelligence 66
General headquarters • Formation headquarters
Specialized headquarters • Signals units • The Royal Flying Corps

Weapons and equipment 74

Tactics 79
Combat operations

Lessons learned 91

Chronology 92

Further reading 94

Index 95

Introduction

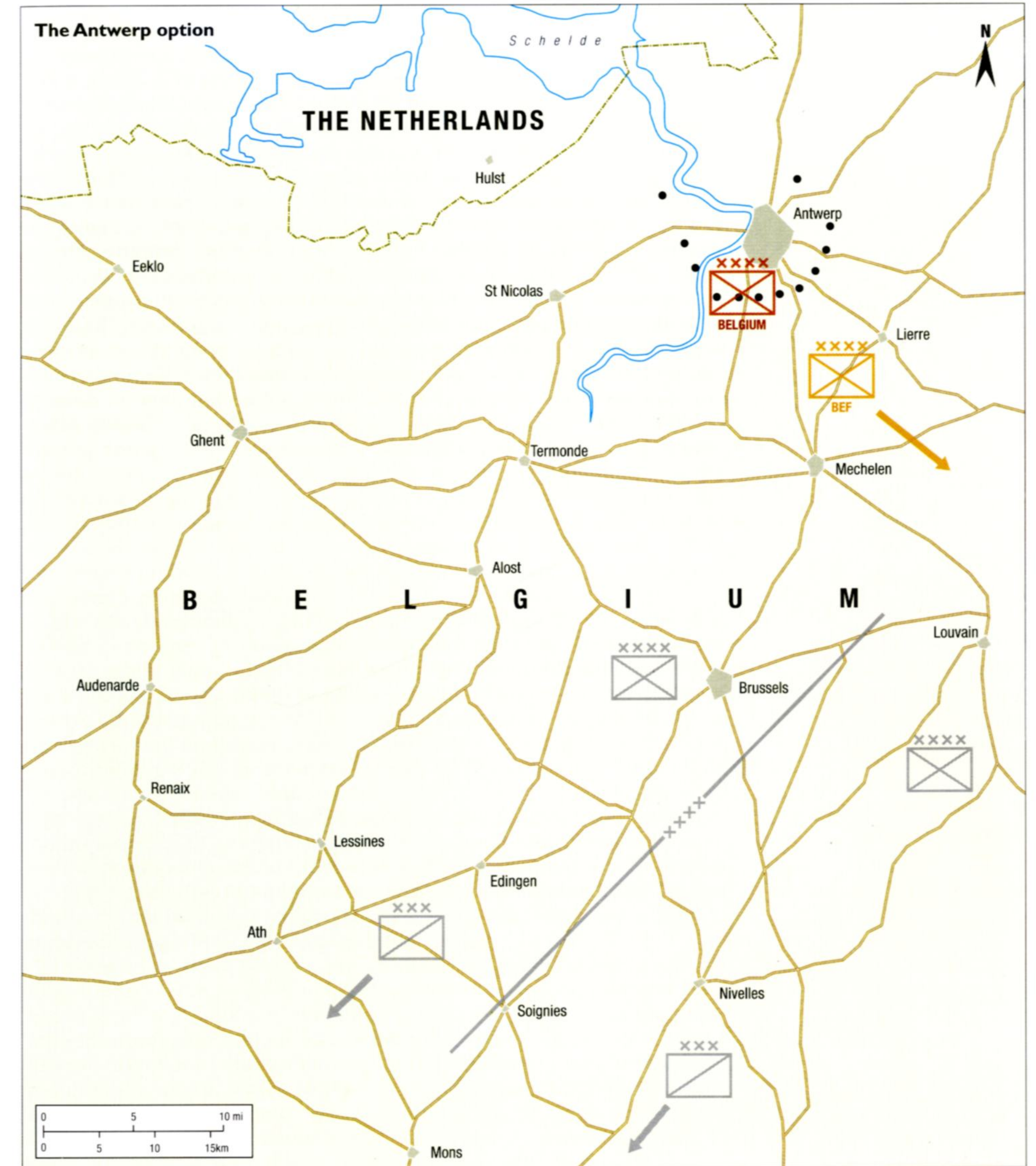
The combat formations of the Expeditionary Force sent out from Great Britain in August 1914 were the military equivalents of Rolls-Royce motorcars. Exquisitely crafted from first-class materials, they enjoyed a huge qualitative advantage over comparable formations of the mass-produced armies of Belgium, France and Germany. The great virtue of these formations, however, was also their greatest defect. Because they had been painstakingly assembled during the long years of peace, they could not be quickly copied without a precipitous drop in quality.

The British formations that followed those of the original Expeditionary Force to the Western Front thus lacked one or more of the latter's great advantages. The four infantry divisions improvised from spare regular units had men that were every bit as good as those of the original Expeditionary Force. Unfortunately, their equipment left much to be desired. The Territorial Force divisions enjoyed a degree of mutual trust and familiarity inconceivable today. Obsolescent weapons and a lack of proper training, however, undermined the great benefits of cohesion. The New Army divisions, blessed as they were with factory-fresh weapons and the genuine enthusiasm of the volunteers that filled their ranks, were likewise plagued by a short supply of skill-at-arms.

In August 1914, roughly a third of Europe was occupied by the two Central Powers (Germany and Austria-Hungary), a second third by the five Allied Powers (Serbia, Russia, France, Belgium and the United Kingdom) and the remaining third by neutral states. Of the latter, a substantial portion would eventually become belligerents.

Compensation for these deficiencies came from an unlikely source. In the years when the Expeditionary Force was being forged, the British Army devoted a considerable degree of effort to building up the coastal defences of the British Isles. By 1914, the defended ports and harbours of the United Kingdom were home to a powerful array of fixed and mobile anti-ship batteries. The weapons that armed these batteries were, for the most part, obsolescent. The officers and men who served these guns – the Regular Army and Territorial Force soldiers of the Royal Garrison Artillery – were, nonetheless, among the most thoroughly

In the years before World War I, British military planners considered deploying the Expeditionary Force to Antwerp. There it would unite with the Belgian Army and operate against the communications of any German forces that were trying to use Belgium as an invasion route into France.



scientific gunners in the world. Among other things, they had mastered the art of long-range indirect fire – an art that had yet to be completely embraced by their comrades in the more mobile branches of the Royal Regiment of Artillery. Put more simply, the gunners of the Royal Garrison Artillery were much more ready to meet the unique challenges of trench warfare on the Western Front than most British soldiers of the day.

The happy accident of a large force of gunners being inadvertently prepared for a largely unexpected style of warfare was not without cost. The weapons that the Royal Garrison Artillery gunners took to the Western Front had, for the most part, been optimized to tear holes in the sides of warships. As a result, they were poorly suited to the most important task at hand – the dropping of high-explosive rounds directly on top of trenches, earthworks and concrete bunkers. This, in turn, greatly restricted the effectiveness of British offensive operations for much of the war. Armed with the wrong sort of weapons and, at times, firing the wrong sort of shells, the gunners of the Royal Garrison Artillery soon found themselves working very hard to achieve minimal results.

Such was the paradox of the British Army of the first 18 months of World War I. Careful preparation in time of peace had paid handsome dividends in the form of the original Expeditionary Force. Serendipity, enthusiasm and enterprise worked wonders to expand that Expeditionary Force into a new and powerful army – the largest that the United Kingdom has ever produced. No amount of luck or pluck, however, could compensate for the lack of the right sort of weapons and the right sort of training in the right sort of quantities. It was not any lack of courage, desire or discipline that made 1915 the year of so many failed attacks. The fault lay with technical decisions taken in the long years of peace, when nearly all concerned with military planning found it easier to imagine hostile cruisers sailing up the Tyne or an enemy army landing in East Anglia than large-scale siege warfare on the other side of the English Channel.

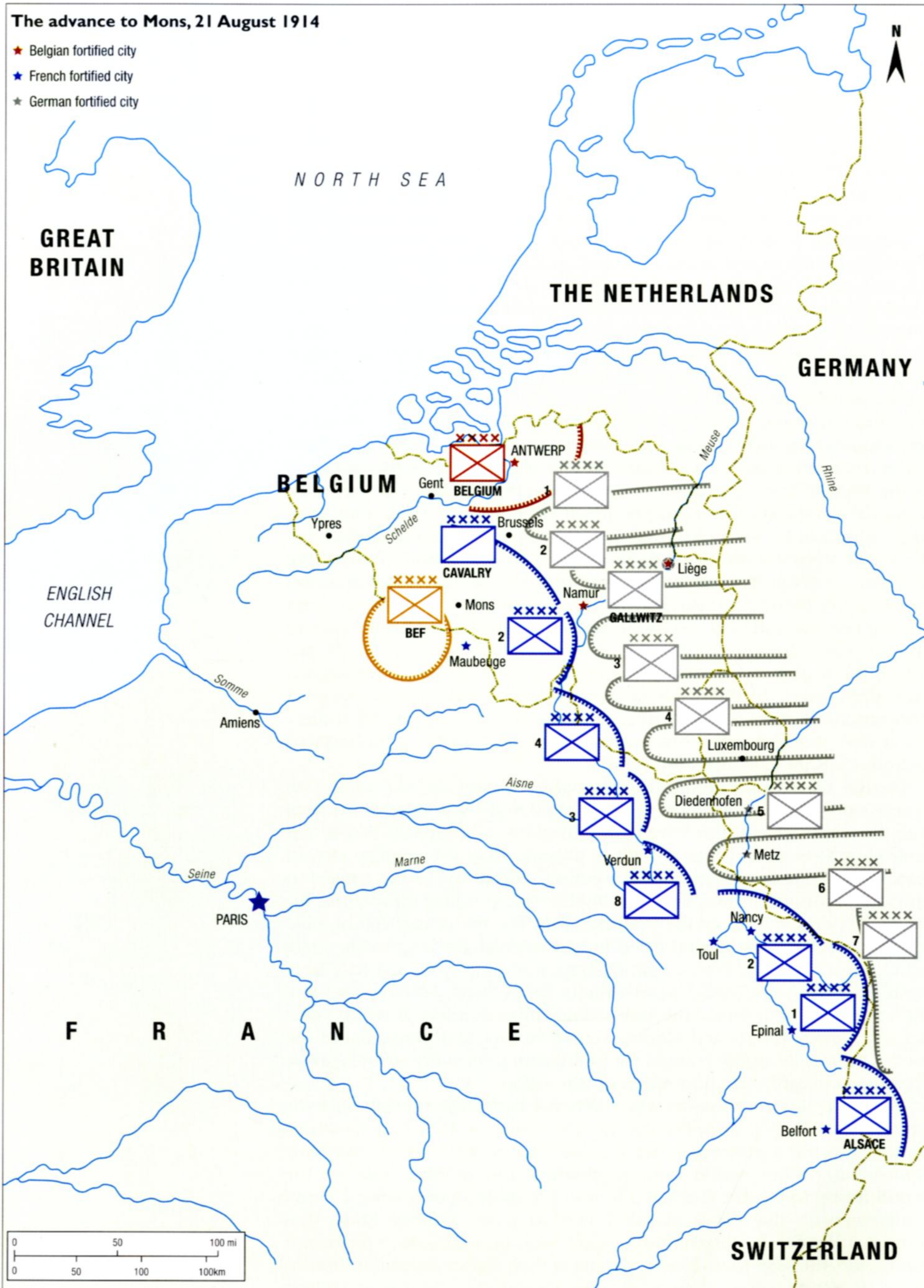
Mission

From its beginnings in the 17th century to the middle of the 20th century, the British Army had three main missions. The first was the defence of the United Kingdom itself against invasion or insurrection. The second was the provision of garrisons to a variety of overseas possessions, colonies and dependencies. The third was the provision of a sizeable Expeditionary Force. In the case of a major European war, this Expeditionary Force was to cooperate with the armies of Continental allies. In the case of a major war on the soil of the Empire – a rekindling of the Boer War, a Russian invasion of India or an attack by the United States upon Canada – the Expeditionary Force would provide both the first reinforcement for forces already on the scene and the vanguard of a larger Imperial army.

In the years immediately prior to World War I, the territorial defence of the United Kingdom was divided between units of the Regular Army stationed in the British Isles, a small number of reserve units closely linked to the Regular Army, and an entirely separate organization known as the Territorial Force. (The latter was composed of part-time soldiers who, even when mobilized for wartime service, could not be sent beyond the borders of the United Kingdom without their explicit consent.) By way of contrast, the provision of overseas garrisons was extremely simple. It was the exclusive responsibility of the long-service volunteers of the peacetime Regular Army. The mobilization of the Expeditionary Force filled the middle ground between home defence and the provision of overseas garrisons. While the core of the Expeditionary Force consisted of units of the peacetime Regular Army stationed in the United Kingdom, these units could not go to war until their ranks had been swelled by recalled reservists, their wagons and artillery pieces were provided with horses and ammunition columns, field hospitals and other service units had been created.

Though theoretically available for service anywhere in the world, the Expeditionary Force of the years prior to World War I was closely associated with the *entente cordiale*. This was a close strategic relationship with France that came close to being a defensive military alliance. From the point of view of France, the immediate benefit of the *entente cordiale* lay in the security it provided to peripheral areas. With the Royal Navy controlling the Atlantic, the French Navy could focus on the Mediterranean. This meant that France could transfer resources from coastal defences and colonial garrisons to the main fight against Germany. With British diplomacy keeping Spain and Italy from joining Germany in an attack against France or her North African possession, the troops told off to defend the Spanish and Italian frontiers, as well as those holding Algeria, Tunisia and Morocco, could be kept to a minimum. In the Pacific, the *entente cordiale* brought France freedom from worry about Japanese aggression against French possessions in that region.

Compared to these benefits, the additional battlefield strength that the Expeditionary Force provided to the 80 or so divisions of the fully mobilized French Army was a relatively minor one. Indeed, it is easy to excuse the many Frenchmen of the period who emphasized the political role of the Expeditionary Force – the fact that it provided tangible proof of Great Britain's commitment to the *entente cordiale* – over its purely military value. It is somewhat harder to forgive the cynical way in which one prominent Frenchman, the soon-to-be-famous Ferdinand Foch, encapsulated this view. In 1910, Sir Henry Wilson, then a brigadier general and Director of Military



Operations at the Imperial General Staff, queried Foch on the subject of the minimum effective size of the Expeditionary Force. Rather than giving Wilson the answer he was seeking, Foch replied that the Expeditionary Force need only consist of 'a single British soldier ... and we will see to it that he is killed'.

The Germans saw things differently. Students of operations and tactics rather than politics and grand strategy, the German war planners were worried about the ability of the Expeditionary Force to interfere with their plan to outflank the French field armies by sending their most powerful armies through Belgium. In the absence of outside help, the Belgian defences could do little to prevent this manoeuvre. If, however, the Expeditionary Force landed at Antwerp and linked up with the six divisions of the Belgian field army, the combined force would present a serious threat to the German plan of campaign. In particular, the joint Anglo-Belgian army would be in a good position to strike at the vulnerable rear areas of the German First Army. Assigned the critical task of swinging around the rear of the French field armies, the First Army could not afford the luxury of slowing its advance in order to protect its own lines of communication. For that reason, the German leadership felt obliged to devote considerable resources, including the cream of their siege artillery, to the rapid reduction of Antwerp.

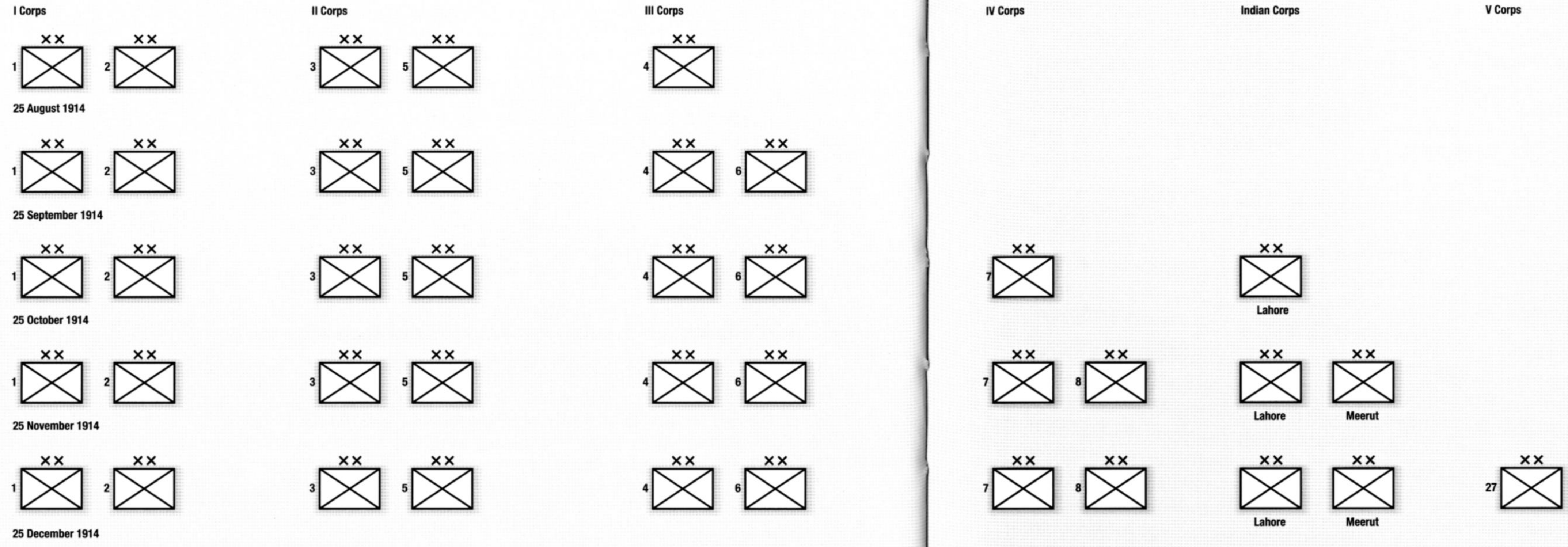
German fears of the entire Expeditionary Force landing at Antwerp at the very start of the war proved to be unfounded. On 5 August 1914, the combined civilian and military leadership of the United Kingdom decided that the best place for the Expeditionary Force was on the left wing of the French Army. Nonetheless, the fact that the Expeditionary Force was able to land at Antwerp deprived the Germans of the option of bypassing the city and letting its Belgian defenders wither on the vine. As a result, the German Fifth Army was deprived of the heavy artillery it needed to carry out its plan to capture Verdun. Likewise, infantry divisions that would have been of great value to the German armies fighting on the Marne were absent from that battle.

Once the mobile phase of the 1914 campaign gave way to positional warfare, the operational leverage provided by the Expeditionary Force declined considerably. At the same time, its strategic value remained considerable. Holding a small portion of the Allied line in France and Flanders, the Expeditionary Force became the advance guard of the British Empire. As such, its mission was to hold on long enough to permit the Empire to convert its vast reserves of men, materials, horses and money into a powerful military instrument. While doing this, the Expeditionary Force had a number of subsidiary tasks to perform. The most concrete of these was the protection of the Channel Ports – the means by which the new armies of the British Empire would land on the continent of Europe. Less concrete, but no less important, was the need to convince the French and Russians that the British Empire was fully committed to the war. This would often require the British Expeditionary Force to undertake operations of little immediate military value in order to demonstrate that the British Empire was doing its part on the Western Front. The former task was essentially defensive, a matter of holding the line. The latter task involved periodic attacks against heavily fortified German positions.

Growth of the Expeditionary Force

The Expeditionary Force was born on 12 January 1907, the day that the War Office issued an order for a thorough reorganization of the Regular Army. Its mother was the new spirit of professionalism that was sweeping through that institution, a spirit that had been sparked by the great embarrassments of the early days of the Boer War and vindicated by eventual British victory in that conflict. The undisputed father was Richard Burdon Haldane, a Scottish lawyer, philosopher and man of business who was then serving as Secretary of State for War in the Liberal cabinet of Sir Henry Campbell-Bannerman. Haldane had no

Growth of the Expeditionary Force in 1914 (infantry divisions)



experience whatsoever of military service or affairs. He was, however, enough of a student of history, strategy and international politics to want to provide the British Empire with a small but efficient striking force.

The number of Regular Army units then stationed in the United Kingdom largely determined the initial size of the Expeditionary Force. Thus, the 72 infantry battalions serving at home allowed Haldane to create six 12-battalion infantry divisions. Likewise, the 14 cavalry regiments located in the British Isles permitted the formation of four three-regiment cavalry brigades and two mounted brigades. (Each of the latter consisted of a single cavalry regiment and two battalions of mounted infantry.) Once these grand parameters were set, the other sorts of units needed to fill out formations were divided. The 12 engineer field companies and six heavy batteries on hand, for example, permitted two of the former units and one of the latter to be given to each infantry division.

It is likely that Haldane wanted to build an Expeditionary Force of more than six divisions. However, by accepting the limits set by the number of

Peace establishments and war establishments of Regular Army units, 1914

	Peace establishment		War establishment	
	Men	Horses	Men	Horses
Infantry battalion	802	11	1,000	55
Engineer field company	146	26	215	76
Field artillery battery	158	75	198	172
Horse artillery battery	175	135	205	228
Cavalry regiment (at home)	640/694	568	543	608

infantry battalions and cavalry regiments on hand, he was able to focus his attention on the three great organizational deficiencies of the British Army of the day – the fact that units at home were woefully short of men and the lack of adequate logistics units. He dealt with both problems by creating the Special Reserve. This organization trained men as riflemen, gunners and military drivers. Upon mobilization, the riflemen would fill the empty ranks of infantry battalions, the gunners would take their places in the under-strength batteries and the drivers would be formed into various kinds of wagon trains – ammunition columns, bridging trains, field ambulances and transport companies.

During the seven years that passed between its creation and the start of World War I, the Expeditionary Force expanded, but only to a very slight degree. In 1910, each infantry division received a third battery of light field howitzers. That same year, the provision of an additional cavalry regiment allowed several hundred mounted infantrymen to return to their home battalions. (Battalions of mounted

Officers and men serving with the British Expeditionary Force

Date	Number
15 September 1914	163,897
15 November 1914	224,647
31 January 1915	347,384
27 February 1915	407,347
2 May 1915	522,315
31 May 1915	601,000

Infantry divisions joining the Expeditionary Force

Type of Divisions	Divisions	Dates
Original Expeditionary Force	1st, 2nd, 3rd, 4th , 5th and 6th	August 1914 to September 1914
Improvised Regular	7th, 8th, Meerut, Lahore, 27th and 28th	October 1914 to January 1915
Territorial Force	46th, 47th, 48th, 49th, 50th and 51st	March 1915 to May 1915
First New Army (K1)	9th, 12th, and 14th	May 1915
Second New Army (K2)	15th, 17th, 18th, 19th and 20th	July 1915

Sir Douglas Haig (1861–1928) spent the first few hours of World War I as commanding general of the First Army of the Expeditionary Force. When, in the course of the first day of mobilization, the First Army was cut down to form I Corps, he stayed with the smaller formation. On 26 December 1914, he took command of a new, substantially larger, First Army. (NARA)

At the outbreak of World War I, Major General Edmund Allenby (1861–1936) was the senior cavalry officer of the British Army at home. (Other officers who had begun their careers as horse soldiers outranked him. These men, however, were no longer exclusively concerned with mounted warfare.) It is thus not surprising that he spent the first five months of the war as the commanding general of the largest cavalry formation of the Expeditionary Force. In August and September 1914, this was the Cavalry Division. In October, November and December, it was the Cavalry Corps. (The man posing with General Allenby is Nicholas I, King of Montenegro.) (NARA)

infantry were not permanent units. Rather, they consisted of men seconded by ordinary infantry battalions.) In 1913, the three remaining mounted infantry battalions were disbanded and the three cavalry regiments that had been assigned to the mounted brigades were formed into an independent cavalry brigade.

When mobilized for service in 1914, the fighting echelon of the Expeditionary Force consisted of six infantry divisions and five cavalry brigades. In addition to this, it possessed an impressive array of 'army troops' – signal companies, supply columns, railway companies, construction companies, bridging trains, and ordnance units, as well as non-divisional infantry battalions and separate squadrons of Irish Horse. Some of these support units were similar to the support units attached to the armies fielded by Continental powers. Others were made necessary by the expeditionary nature of the Expeditionary Force. That is to say, while Continental armies could make use of an existing network of depots and installations, the Expeditionary Force had to provide these things for itself.

On 5 August 1914, the day that the British Army began to mobilize for war, the impending deployment of the Expeditionary Force was complicated by the decision to delay the despatch of two of its infantry divisions. These divisions, the government decided, were needed to protect the British Isles against the twin threats of a German invasion and civil disturbance in Ireland. One of these divisions, the 4th Infantry Division, was only delayed for a matter of days. It arrived in France on 22 August, less than a week behind the main body

The Western Front, 1st January 1915

At the start of 1915, the British Expeditionary Force provided two of the 11 field armies holding the line on the Western Front.

★ Belgian fortified city
★ French fortified city
★ German fortified city

Field Marshal Sir John Denton Pinkstone French (1852–1925) commanded the Expeditionary Force from August 1914 until December 1915. Though he had made his reputation as a soldier by commanding cavalry units in Sudan and South Africa, his forte in the years immediately prior to World War I was military administration. This background prepared him well for the task of overseeing the rapid growth of the Expeditionary Force during the first 16 months of the war. (Marcus Cowper)

After spending a fortnight (23 September 1914–4 October 1914) in command of the 4th Division, Sir Henry Rawlinson (1864–1925) took charge of IV Corps. Originally assembled for independent action in support of the defence of Antwerp, IV Corps did not join the Expeditionary Force until after the evacuation of British forces from that city. (NARA)

of the Expeditionary Force (which completed its crossing of the Channel on 17 August). The other infantry division that had been left behind, the 6th Division, did not make the journey to France until the second week of September. It was thus 15 September 1914 before the entire Expeditionary Force – some 163,897 officers and men – was fully assembled on the Continent. By that time, the first nine formations to land – the 1st, 2nd, 3rd and 5th Divisions and the 1st, 2nd, 3rd, 4th and 5th Cavalry Brigades, had been involved in active operations for three weeks.

Well before the original Expeditionary Force had finished its deployment to France, the War Office began to lay the groundwork for its expansion. In the course of the first year of the war, this expansion took place in three stages. The first stage, which lasted from late September 1914 through to January 1915, saw the size of the Expeditionary Force doubled by the provision of six infantry divisions assembled after the start of the war from regular units of the British and Indian armies. The second stage, which ran from the late winter of 1915 to the early spring that year, saw the arrival in France of six Territorial Force infantry divisions. The third and fourth stages, which took place (respectively) in May and July of 1915, added a total of eight New Army infantry divisions to the Expeditionary Force.

In addition to these divisions, a large number of other formations and units joined the Expeditionary Force in the course of the first year of the war. These included the 1st Canadian Division, nine cavalry brigades, a complete divisional artillery, and hundreds of non-divisional units. The 1st Canadian Division served as a sort of fire brigade, bolstering the strength of army corps that were either involved in heavy combat or had particularly long sectors to defend. The cavalry brigades allowed the creation of two complete cavalry corps – the Cavalry Corps (of eight brigades) and the Indian Cavalry Corps (of six brigades). The divisional artillery, taken from a New Army division that had yet to complete its formation, permitted the creation, in France, of the Guards Division. The non-divisional units included infantry battalions (which were attached to existing divisions), batteries of heavy and siege artillery (which permitted the creation of a heavy artillery reserve), engineer companies of various sorts, and support elements to bolster the base and lines-of-communication infrastructure that kept the Expeditionary Force supplied with the necessities of life and the tools of war.

At the end of July 1915, the British Empire had 27 infantry divisions, five cavalry divisions and a growing array of non-divisional units serving on the Western Front. In the course of one short year, the Expeditionary Force had expanded by a factor of five. As the French Army had only expanded slightly during this period (and the Belgian Army had actually shrunk) the proportional contribution made by the Expeditionary Force to the land war against Germany had grown to an even greater degree. In August of 1914, the Expeditionary Force provided less than 6 per cent of the front-line infantry battalions of the Western alliance. In July of 1915, it provided 30 per cent of such units. Translated into the language of strategy, this phenomenal expansion changed the essential purpose of the the Expeditionary Force. What had once been a token of good faith offered by a naval power to its Continental ally had become a major land army in its own right.

Doctrine and training

The British Army of 1914 had much less in the way of formal doctrine than the armies of major Continental powers. It was mercifully free of the explicit doctrine of the French Army – the dogmatic fruit of pedantic attempts to codify precise rules for every conceivable battlefield situation. It also lacked the implicit doctrine of the German Army – the extensive use of war games, staff rides, debate and discussion to give officers a bird's-eye view of the tactical situations in which they found themselves. This was unfortunate, because such understanding of the larger context of a particular engagement would have been a powerful complement to the virtues that many British officers shared with their German counterparts – the habit of taking bold decisions in uncertain situations and the belief that every tactical situation was sufficiently unique to demand a custom-tailored solution.

For most officers of the Expeditionary Force, the starting point for such solutions was a set of techniques and assumptions developed in the course of the Boer War (1899–1902). More accurately described as the 'Second Anglo-Boer War', this had been a three-year struggle between the forces of the British Empire and those of the Dutch-speaking republics of South Africa. Fighting in South Africa had taught the British Army to appreciate three things – the value of rifle marksmanship, the necessity for providing field guns with the heaviest possible shells and the ability of light field howitzers to deal with hostile forces protected by hills, trenches and other forms of cover. These three lessons gave the original Expeditionary Force a number of key advantages. The men of British regular infantry battalions were far better shots than their contemporaries in the French, German or Belgian armies. This, in turn, allowed the British field artillery to focus on doing those things that the infantry could not do – firing at targets that were beyond effective rifle range and attacking targets that were hidden by intervening terrain.

One of the great virtues of the infantry battalions of the original Expeditionary Force was the emphasis that pre-war training programmes placed on fieldcraft and individual marksmanship. In many battalions, the men who displayed the greatest skill in these areas were brought together in a special scout section. (Imperial War Museum, Q53319)

In the decade before World War I, Sir Stanley B. Von Donop (1860–1941) had repeatedly called for the provision of modern heavy howitzers to the Expeditionary Force. Though he became Master General of the Ordnance (and thus the official in charge of providing weapons to the British Army) on 7 February 1913, he was not in a position to act on his own recommendation until after the outbreak of war. In the autumn of 1914, he used sophisticated bureaucratic manoeuvres and placed orders for 140 up-to-date heavy howitzers. Thus, by the time the General Headquarters of the Expeditionary Force made its first formal request for such weapons in the spring of 1915, the first of them were beginning to emerge from the factories. (National Portrait Gallery)

The British Army did not learn as much from the Russo-Japanese War (1904–05) as it had from the Boer War. In particular, the British Army failed to appreciate the role that heavy howitzers, trench mortars, barbed wire and trenches would play in the next major conflict. Indeed, the only sustained attempt by British officers to make sense of the lessons of the Russo-Japanese War took place in the Indian Army. At a time when the British battalions stationed in the United Kingdom were preparing to fight highly mobile battles in open terrain, British and Indian battalions in India were practising trench warfare. In two cases, commanders of Indian Army infantry divisions went so far as to order the construction of elaborate trench systems so that their troops could execute mock assaults.

The greatest single mistake made by the British Army in the decade before 1914 was the failure to procure modern heavy field howitzers – weapons like the 6in. (152mm) and 8in. (203mm) quick-firing howitzers that would play such an important role in the last two years of the war. The technology needed to build such howitzers, particularly the ability to fabricate the right sort of recoil mechanisms, had been widely available since 1902 – the year that the German Army adopted its quick-firing heavy field howitzers, particularly the 150mm piece that British soldiers would come to know (from the diameter of its bore in inches) as the 'five point nine'.

Unfortunately, the officers who understood the value of heavy field howitzers were did not have the same sort of influence as the officers who advocated the acquisition of such weapons as the 60-pdr heavy gun. Plans for adopting heavy field howitzers also ran afoul of considerable opposition within their natural home – the Royal Garrison Artillery. In particular, Major General Hugh P. Hickman, one of the most senior members of that corps during the decade before 1914, was of the opinion that heavy howitzers should only be used for coastal defence and attacks on permanent fortifications. Because of this, he thought that there was no need to replace the obsolete 6in. heavy howitzers acquired towards the end of the 19th century or even to provide a sufficient number of field carriages to enable all of them to be used by the Expeditionary Force.

It would take the better part of three years to remedy the failure to procure modern heavy field howitzers prior to 1914. Design work on one such weapon – a new 6in. howitzer that promised to remedy the deficiencies of the old 6in. howitzer – began in January of 1915. Six months later the first batch of 14 new 6in. howitzers had emerged from the factory. It would be well into 1916, however, before average monthly production of these weapons would exceed 16 pieces. Even then, the projectiles developed for this new weapon experienced considerable teething pains, with a high percentage of those fired failing to explode when they were supposed to. The running mate of the new 6in. howitzer – the new 8in. howitzer that began to appear on the Western Front in 1916 – had a similar, but even slower career. It was thus the middle of 1917 before the British Empire forces on the Western Front had an array of heavy howitzers comparable to that of the German Army of 1914.

British troops in training practise one of the basic techniques of early-war infantry tactics – the use of a ditch or embankment to provide cover for a firing line. In the attack, this technique would be used to provide covering fire to advancing friendly forces. In the defence, it would buy time for the building of proper trenches. (Marcus Cowper)

Howitzers were important on the Western Front because they were much more likely to hit a target with a horizontal face – a target such as a well-sited trench system. Quick-firing howitzers were important because they could hit a row of such targets in rapid succession. Heavy howitzers were important because their shells were sufficient powerful to do substantial damage to modern field works. Heavy guns – weapons like the 60-pdr heavy gun – were optimized for hitting targets with a vertical face – targets such as the walls of a fortress or a ship at sea. Because of this, they were useful for such tasks as destroying the church towers that the Germans used as observation posts.

The failure to provide a sufficient number of the right sort of heavy howitzers was particularly tragic because the Expeditionary Force of the first year of the war was otherwise well prepared for the challenge of positional warfare on the Western Front. This was partially a result of equipment and partially a function of military culture. Rifles that were short and robust, machine guns that were light and reliable and field pieces that fired heavy shells were inherently better suited to trench warfare than comparable French and German weapons. A doctrinal tradition that stressed the primacy of local conditions over textbook solutions empowered officers of all ranks to experiment, innovate and adapt. A social environment in which subordinates could, in most cases, offer their opinions without fear of retribution enhanced this doctrinal tradition.

The great mistake of the pre-war period prevented the Expeditionary Force of the first year of World War I from succeeding in all but the most limited sort of offensive operations. Lack of kit, however, did not prevent the Expeditionary Force from performing its only essential mission – keeping the anti-German alliance alive until the enormous resources of the British Empire could be converted into military formations and brought to bear on the Western Front.

Mobilization

Like the other armies that took part in World War I, the British Army could not go to war until after it had been mobilized. For units of the Regular Army at

The cavalry reserve regiments, artillery reserve batteries and infantry reserve battalions had the task of completing the training of the men left behind by the Regular Army units mobilized in August 1914. Here, men of a cavalry reserve regiment practise the demanding art of riding in formation over difficult terrain. (National Army Museum)

The great achievement of Richard Burdon Haldane, 1st Viscount Haldane (1856–1928), was less the creation of the Expeditionary Force than the building up of its administrative and logistics infrastructure. This largely unsung labour ensured that the Expeditionary Force would be able to deploy overseas within a few days of a declaration of war. (National Portrait Gallery)

home, this was largely a matter of using recalled reservists, requisitioned horses and stored equipment to reorganize themselves in accordance with their war establishments. For units of the Territorial Force, mobilization involved mustering the part-time members of units into full time service and the commencement of training programmes. In addition to these basic tasks, mobilization involved the creation of a number of new units that had not existed in time of peace. These wartime units included ammunition columns, various headquarters and signal units, and field ambulances, as well as the siege batteries of the Royal Garrison Artillery.

For most existing units of the Regular Army, mobilization involved the exchange of a rather modest peace establishment for a considerably more generous war establishment. The number of men in an infantry battalion grew from 802 to 1,000 – a rise of nearly 25 per cent. An even greater proportional increase took place in Royal Engineer field companies. These were allowed 146 men before mobilization and 215 men afterwards. Artillery units did not take in as many additional men at mobilization. Their strength in horses, however, was greatly augmented. In times of peace, a field artillery battery had only enough draught horses to fill the needs of a single two-gun section. (For this reason, only one section in three could conduct field training at any given time.) A similar situation reigned in peacetime field companies of the Royal Engineers, which could only transport a fraction of their standard allowance of tools and stores. Upon mobilization, the number of draught horses supplied to field artillery batteries and engineer field companies was nearly trebled. The increase in the equine strength of horse artillery batteries, though still considerable, was not so marked. That of heavy batteries, on the other hand, was much more dramatic.

The great exception to the rule that a unit expanded upon mobilization was provided by the case of cavalry regiments. The peacetime establishments of cavalry regiments were substantially higher than those of wartime cavalry regiments. The largest type of peacetime cavalry regiment serving at home was authorized 694 men and 568 horses. When it went to war, it added 40 horses while losing 151 men. The reason for this reduction in the number of men was the fact that a peacetime cavalry regiment at home contained a large percentage of men who were still learning the rudiments of the horse soldier's trade. These men, both recruits and men in the regimental riding school, were left at home when the regiment went to war.

Role of reservists

The vast majority of the men needed to bring mobilized Regular Army units up to strength were reservists – former soldiers who had been released from active service with an obligation to return to the colours in time of war. These reservists were of two types. Members of the Army Reserve had served with the Regular Army for a bare minimum of two years. (In the years before 1914, the standard enlistment in the Regular Army was for a period of 12 years. Only a portion of this period, however, was actually spent in uniform. After spending anywhere from two to eight years on active service, a soldier was released to the Army Reserve for the remainder of his enlistment.) Members of the Special Reserve had much less in the way of military experience. These men received the same basic training as soldiers of the Regular Army – three to six months of close order drill, physical training, lectures and musketry. Once this initial training was complete, however, members of the Special Reserve turned in their uniforms and returned to their home communities. For the rest of their six-year term of service, these soldiers were hard to distinguish from civilians. Indeed, the only thing that set them apart from their neighbours was the receipt of a small retainer from the government and short periods of refresher training.

Dependence upon reservists divisions of the original Expeditionary Force, 1 February 1913

1st Division	
Infantry	59%
Field artillery	50%
2nd Division	
Infantry	60%
Field artillery	58%
3rd Division	
Infantry	59%
Field artillery	60%
4th Division	
Infantry	55%
Field artillery	53%
5th Division	
Infantry	62%
Field artillery	55%
6th Division	
Infantry	59%
Field artillery	63%
Cavalry Division	
Cavalry	27%
Horse artillery	57%

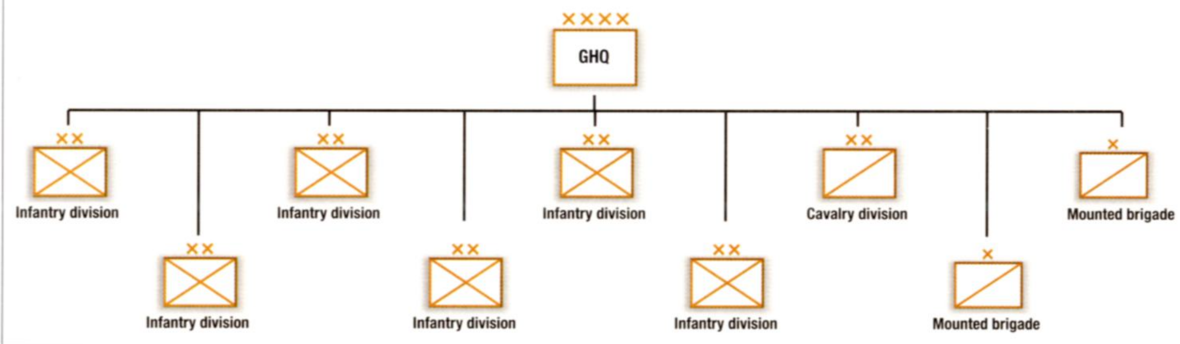
Dependence upon members of the Special Reserve varied widely from one type of unit to another. Infantry and field artillery units required quite a few Special Reservists to fill the gaps in their ranks. Cavalry regiments, on the other hand, relied entirely upon the experienced soldiers of the Army Reserve to meet their mobilization needs. The number of these required by each regiment varied greatly. The 4th Dragoon Guards, for example, were mobilized with fewer than a dozen members of the Army Reserve while the 6th Dragoon Guards needed more than a hundred to fill its ranks.

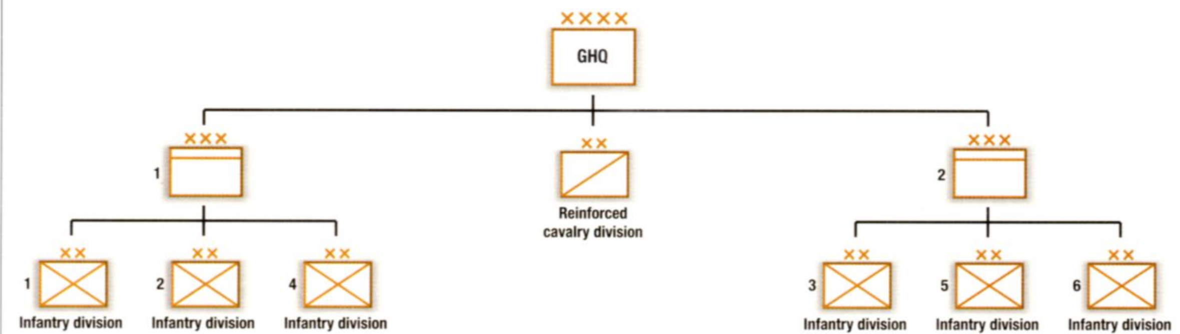
Very few units of the Territorial Force were ready to go overseas at the start of the war. A notable exception was provided by the infantry battalion of the Honourable Artillery Company, which landed in France in September 1914. (The Honourable Artillery Company was a unique, all-Territorial regiment that began the war with one battalion of infantry and two batteries of horse artillery.) (Marcus Cowper)

Unit organization

Most of the armies that went to war in 1914 had been designed in accordance with the principle of nested cohesion. Battalions were inalienably linked to regiments. Regiments were permanently assigned to brigades. Brigades were closely tied to divisions. Divisions were part and parcel of army corps. The British Army was different. Because it had so many different jobs to do, it was organized on the principle of modular autonomy. The basic building blocks of the four basic arms – infantry battalions, artillery batteries, cavalry regiments and engineer companies – were combined in many different ways in order to create a wide variety of custom-tailored task forces. In cases, such as that of the Expeditionary Force, where a task force grew too large for one general to command, these basic building blocks could be assembled into modular formations – infantry divisions, cavalry divisions and independent brigades.

In keeping with the principle of modular autonomy, the Expeditionary Force was originally designed as an extraordinarily 'flat' organization. (A 'flat' organization is one in which a large number of subordinates report directly to a single superior.) In its first incarnation, which lasted from 1907 to 1909, it consisted of nine self-contained formations – six infantry divisions, a cavalry division and two mounted brigades. All nine of these formations reported directly to headquarters of the Expeditionary Force as a whole. In 1909, the extreme 'flatness' of Expeditionary Force was reduced by the introduction of

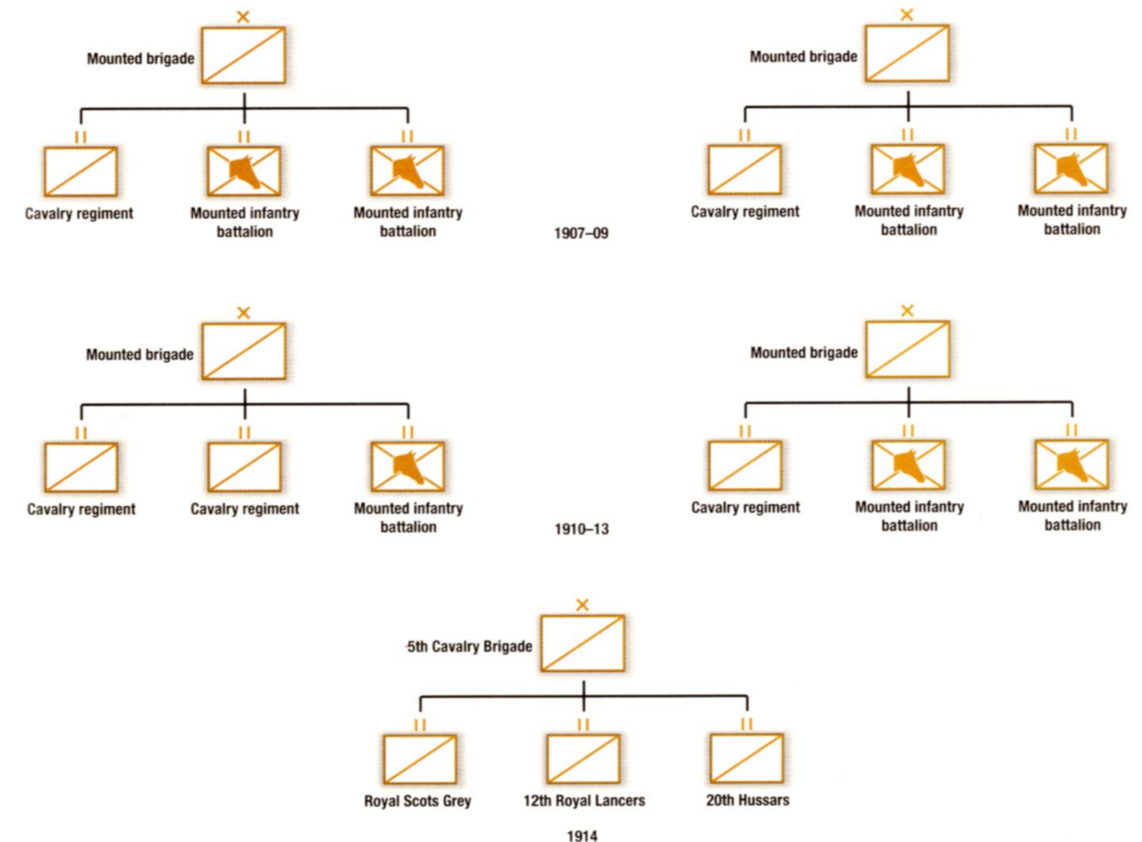




two intermediate headquarters. Known as 'headquarters of an army' (a group of two or more divisions), these headquarters allowed the creation of task forces within the Expeditionary Force. While roughly comparable to the army corps of contemporary European armies, the 'armies' built around these headquarters had no permanent organization.

The mobilization plans in force at the very start of World War I called for each army to begin the campaign with three infantry divisions. The First Army, under Lieutenant General Sir Douglas Haig, was to go to war with the 1st, 2nd and 4th Divisions. The Second Army, under Lieutenant General Sir James Grierson, was to have the 3rd, 5th and 6th Divisions. Rather than being divided between the two armies, all five cavalry brigades were formed into a special cavalry formation with a somewhat eccentric internal structure. Comparable in size to a Continental cavalry corps, this command consisted of a single very large cavalry division (known simply as the Cavalry Division) and an independent cavalry brigade (the 5th Cavalry Brigade). This cavalry formation had no headquarters of its own. Rather, the commander of the 5th Brigade reported to the commander of the Cavalry Division (Major General Edmund Allenby) and the commander of the Cavalry Division reported directly to the field marshal commanding-in-chief of the Expeditionary Force as a whole, Sir John French.

On 5 August 1914, two decisions governing the deployment of the Expeditionary Force threw a spanner into the works of its organizational scheme. The decision to keep the 4th and 6th Divisions in the United Kingdom reduced the number of infantry divisions in each army from three to two, thereby making each army the rough equivalent of a standard French army



corps. The decision to sent the Expeditionary Force to northern France rather than Antwerp converted it from an independent strategic entity into the left wing of the French field army. As such, it would have to engage in frequent and intimate cooperation with the French formations on its right. In keeping with these decisions, the two armies were demoted to the rank of army corps. The First Army became I Corps and the Second Army was re-designated as II Corps.

In the course of the first six months of the war, the arrival of eight additional infantry divisions made possible the creation of four additional army corps. Thus, by Christmas of 1914, it was clear that the Expeditionary Force would soon be as flat an organization as it had been in 1907, with six army corps, as well as several cavalry formations and all sorts of rear area organizations, reporting directly to the General Headquarters. The solution to this problem, implemented on Boxing Day, was to recreate the two armies that had been transformed into army corps at the start of the war. This was done by promoting the general officers commanding the two senior army corps of the Expeditionary Force – Sir Douglas Haig (I Corps) and Sir Horace Smith-Dorrien (II Corps). (On 17 August 1914, Smith-Dorrien replaced the original commander of II Corps, Sir James Grierson, who had unexpectedly died of heart trouble the day before.) As these commanders took many of their key staff officers with them to their new headquarters, the formation of the two armies was as much the revival of an old institution as the creation of a new one.

In the spring of 1915, the practice of forming a new corps headquarters for every two infantry divisions that arrived in France was abolished. Instead, each of the six Territorial Force divisions that joined the Expeditionary Force in March, April and May 1915 was attached to one of the six existing army corps. This act converted the army corps from 'binary' organizations (with two subordinate formations) into 'triangular' ones (with three subordinate formations). It also had the effect of increasing the frontage that each corps could defend, economizing on trained staff officers (who were in very short supply at the time) and compensating for the two inherent weaknesses of the Territorial Force divisions. (In the spring and summer of 1915, the Territorial Force divisions suffered from a lack of both firepower and manpower.)

The symmetry of the new 'triangular' army corps was occasionally disrupted by the presence of the Canadian Division. Arriving in France in February 1915, this infantry division spent its first six months on the Western Front as a nomad formation, moving from one army corps to another every few weeks or so. In doing this, the Canadian Division bolstered the strength of army corps that were faced with particularly difficult tasks, had particularly large sectors to defend, or needed to give one or more of its permanently assigned divisions a few days out of the line. In short, frequent shifting of the Canadian Division added a degree of flexibility to the organization of the Expeditionary Force. This, in turn, permitted the assignment of particular divisions to particular corps to remain stable for much of the first year of the war.

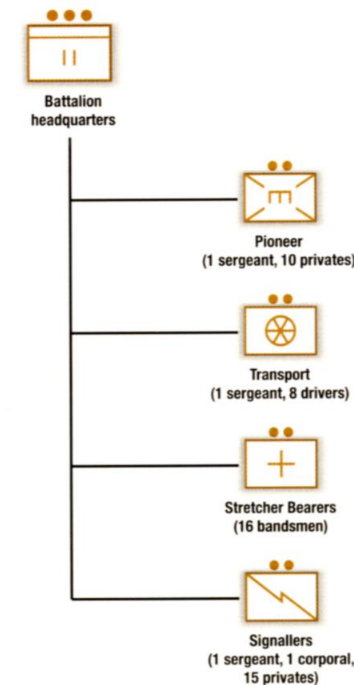
While the existing army corps could accommodate the six Territorial Force divisions that reported for duty on the Western Front in the late winter and early spring of 1915, they could not do the same for the New Army divisions that began to arrive in the late spring and early summer of that year. To further complicate matters, planners at General Headquarters had serious doubts about the efficiency of New Army divisions. This made them more willing to disrupt the organization of existing army corps than to risk the creation of new army corps that consisted entirely of New Army divisions. The months of June and July 1915 thus saw the formation of a new army (Third Army), the creation of three new army corps (VI, VII, and X) and a reshuffling of infantry divisions. For a short period of time, the Second and Third Armies were able to maintain an equal distribution of different types of divisions within their corps. For much of the summer of 1915, each army corps assigned to that army consisted of one Regular Army division, one Territorial Force division and one New Army division. The First Army, however, could not achieve a similar degree of elegance in its organizational charts. The only hard and fast rule in the organization of its army corps was that each corps possessed at least one Regular Army division.

Infantry battalions

For more than two centuries before the outbreak of World War I, the basic building block of European infantry had been the battalion. This was a unit of 500 to 1,000 uniformly armed men, each of whom was provided with a shoulder arm of some sort (first a muzzle-loader, then a breech-loading rifle and finally a bolt-action magazine rifle) and a bayonet. Each battalion was invariably divided into a number of companies. These companies, however, existed primarily for administrative purposes. Their effect on the way that battalions were employed in battle was minimal. There was thus great variety in the number of companies in each battalion. In some armies a battalion might consist of as many as ten companies. In others, the number of companies per battalion might be as low as six. After 1870, this situation began to change. The increased dispersion made necessary by improved firearms and more powerful field artillery turned the infantry company into a tactical unit. In response to this development, most European armies reduced the number of companies in each battalion to four.

By 1912, the one European army that had yet to adopt the four-company battalion was that of Great Britain. At a time when German, French and Russian battalions consisted of four large companies, battalions of the British Army were divided into eight small ones. While some military leaders were perfectly happy with this old-fashioned state of affairs, others were not. In particular, officers who followed developments in contemporary European armies became concerned that the British infantry battalion had fallen behind the times. As a

Headquarters of an infantry battalion, major elements, war establishment, 1914



Infantry regiments of the British Army, August 1914

Regiments of Foot Guards	
Grenadier Guards	Coldstream Guards
Scots Guards	Irish Guards
Regiments of Infantry of the Line	
The Royal Scots (Lothian Regiment)	The Royal Sussex Regiment
The Queen's (Royal West Surrey)	The Hampshire Regiment
The Buffs (East Kent Regiment)	The South Staffordshire Regiment
The Royal Lancaster Regiment	The Dorsetshire Regiment
The Northumberland Fusiliers	The South Lancashire Regiment
The Royal Warwickshire Regiment	The Welsh Regiment
The Royal Fusiliers (City of London Regiment)	The Black Watch (Royal Highlanders)
The Liverpool Regiment	The Oxfordshire and Buckinghamshire Light Infantry
The Norfolk Regiment	The Essex Regiment
The Lincolnshire Regiment	The Sherwood Forresters
The Devonshire Regiment	The Loyal North Lancashire Regiment
The Suffolk Regiment	The Northamptonshire Regiment
The Somerset Light Infantry	The Royal Berkshire Regiment)
The West Yorkshire Regiment	The Royal West Kent Regiment
The East Yorkshire Regiment	The King's Own Yorkshire Light Infantry
The Bedfordshire Regiment	The King's Shropshire Light Infantry
The Leicestershire Regiment	The Middlesex Regiment)
The Royal Irish Regiment	The King's Royal Rifle Corps
The Yorkshire Regiment	The Wiltshire Regiment
The Lancashire Fusiliers	The Manchester Regiment
The Royal Scots Fusiliers	The North Staffordshire Regiment
The Cheshire Regiment	York and Lancaster Regiment
The Royal Welch Fusiliers	The Durham Light Infantry
The South Wales Borderers	The Highland light Infantry
The King's Own Scottish Borderers	The Seaforth Highlanders
The Cameronians (Scottish Rifles)	The Gordon Highlanders
The Royal Inniskilling Fusiliers	The Queen's Own Cameron Highlanders
The Gloucestershire Regiment	The Royal Irish Rifles
The Worcestershire Regiment	The Connaught Rangers
The East Lancashire Regiment	Argyll and Sutherland Highlanders
The East Surrey Regiment	The Leinster Regiment (Royal Canadians)
The Duke of Cornwall's Light Infantry	The Royal Munster Fusiliers
The West Riding Regiment	The Royal Irish Fusiliers
The Border Regiment	The Royal Dublin Fusiliers
The Rifle Brigade (The Prince Consort's Own)	

result of this, the leading lights of the British Army began a heated debate over the relative virtues of the eight-company and four-company battalions.

On 1 October 1913, the War Office officially discarded the old eight-company battalion and adopted a four-company structure for all infantry battalions of the Regular Army. This included foot guards battalions, infantry battalions stationed at home and infantry battalions stationed overseas. The companies were to be commanded by majors or senior captains, with a captain as second-in-command. Platoons were to be commanded by lieutenants, with a sergeant designated as second-in-command. (In the absence of a lieutenant, this platoon sergeant was to command the platoon. He was not, however, to have an assistant of his own. Rather, the corporals in command of sections were to remain with their sections.) The duties of the senior non-commissioned officer in each company were to be shared by two non-commissioned officers – the company sergeant-major and the company quartermaster sergeant. The number of officers and warrant officers in the new four-company battalion was as follows – six officers in each of four companies plus six battalion staff officers (officer commander, second-in-command, adjutant, quartermaster, machine-gun officer and signalling officer) and a regimental sergeant-major.

Sir Ivor Maxse (1862–1958) was responsible for a number of innovations that are still very much part of day-to-day service in a British infantry battalion. These include the introduction of the section and platoon, the employment of second lieutenants as platoon commanders, and the institution of the company sergeant-major. (National Portrait Gallery)

Regular Army infantry battalions

At the outbreak of war in 1914, the British Army possessed 69 regiments of regular 'infantry of the line'. These regiments were purely administrative organizations with no tactical function whatsoever. Their chief purpose was to provide their component infantry battalions with officers, non-commissioned officers and men. To this end, each regiment was associated with a particular recruiting ground. In many cases, the recruiting ground also provided the regiment with its name. Thus, the Royal Dublin Fusiliers recruited in the city of Dublin, the Middlesex Regiment drew its men from the county of Middlesex, the Argyll and Sutherland Highlanders were closely linked to the counties of Argyll and Sutherland, and the West Riding Regiment was based in the West Riding of Yorkshire.

Most (64 out of 69) of the regular infantry regiments consisted of two regular infantry battalions. In keeping with a scheme adopted in 1881, one of these two battalions was stationed 'abroad' while the other was kept 'at home'. The battalions posted abroad had but one mission – to assist in the defence of the Empire. The battalions kept at home had three basic tasks to perform. Firstly, they provided a force for home defence. Secondly, they provided a pool of infantry battalions from which the infantry brigades of the Expeditionary Force could be formed. Thirdly, they provided drafts of trained men to the overseas battalions of their respective regiments. (Because overseas battalions had to be kept as close to their war establishments as possible, any deficiency had to be made up by the battalions at home. This often meant that battalions at home were considerably below strength.)

From the point of view of recruiting, the system of 'one battalion at home, one abroad' was admirably suited to the needs of the British Army. From the point of view of strategy, however, the 'linked battalion' system was somewhat lacking in flexibility. If, for example, a battalion at home was sent overseas to

respond to a crisis, it would not only lack a source of replacements for its own casualties, but would cease to be able to provide drafts for its sister battalion. Some mitigation of this problem was provided by the five 'double-size' regiments. Each of these regiments – the Rifle Brigade, the King's Royal Rifle Corps, the Worcestershire Regiment, the Middlesex Regiment and the Royal Fusiliers – consisted of four regular battalions. While the usual distribution of the battalions of these regiments was 'two at home and two abroad', it was possible to send out three battalions of each regiment without causing undue disruption to the overall system. A second source of flexibility was provided by the nine battalions of the Brigade of Guards. While normally kept at home, these were nonetheless liable for foreign service. Thus, in cases where the demand for line battalions exceeded the supply, a battalion or two of Foot Guards could be sent abroad.

In August 1914, there were a total of 148 regular infantry battalions in the British Army. Seventy-four of these were serving overseas. Of the remaining 74 regular battalions, all but four were assigned to the original Expeditionary Force. Of the nine Foot Guards battalions, six were allocated to the original Expeditionary Force while three began the war as unassigned units. What this meant was that no new regular infantry divisions could be formed without drawing upon battalions posted overseas. It also meant that the lion's share of the burden of defending the British Isles against a hostile landing force would fall upon the Territorial Force.

Upon mobilization, Regular Army infantry battalions underwent a number of structural changes. The bands were converted into stretcher-bearer sections. The battalion headquarters were greatly expanded, with signallers, pioneers and drivers being taken out of their parent companies and assigned to newly formed signalling, pioneer and transport sections. The sergeants who managed officers' messes, the master tailors and the orderly room sergeants were transferred to their regimental depots while a medical officer, an armourer and five medical orderlies joined each battalion.

Territorial Force infantry battalions

Composed entirely of part-time soldiers – men who trained for a few hours each Saturday evening and for a fortnight each year – the Territorial Force of 1914 was substantially larger than the Regular Army. Where the peacetime Regular Army had 148 battalions of infantry of the line, the peacetime Territorial Force had 207 battalions of infantry. This was enough to provide a full infantry component to the 14 infantry divisions of the Territorial Force (168 battalions) and have 39 battalions left over for other duties.

British soldiers escort German prisoners, most of whom were captured in the battle of Neuve Chapelle, through the streets of the town of Handforth in Lancashire. The obsolete long rifles, leather ammunition pouches and rolled greatcoats of guards suggest that they belong to a second-line infantry battalion of the Territorial Force. (Marcus Cowper)

The majority of Territorial Force infantry battalions in existence in 1914 (170 out of 207) were affiliated with regular infantry regiments. As such, they were numbered with the other battalions (whether regular, reserve or extra reserve) of that regiment. Thus, while the 1st and 2nd Battalions of the Duke of Cornwall's Light Infantry were regular battalions and the 3rd Battalion was a reserve battalion, the 4th Battalion was a Territorial Force battalion. Regular infantry regiments that were associated with large cities tended to have a large number of affiliated Territorial Force infantry battalions. The Royal Scots (Lothian Regiment), which recruited in Edinburgh, had seven Territorial Force battalions while the Liverpool Regiment had six. Similarly, regiments that drew their men from sparsely populated areas had far fewer. The Dorsetshire Regiment, for example, had but one Territorial Force battalion. Irish regiments (e.g. the Connaught Rangers or the Leinster Regiment), rifle regiments (i.e. the Rifle Brigade and the King's Royal Rifle Corps) and regiments of Foot Guards had no Territorial Force battalions at all.

Territorial Force battalions that lacked affiliation with regular infantry regiments were assigned to one of the ten Territorial Force infantry regiments. The largest of these was the gargantuan London Regiment, which provided 26 peacetime battalions. The next largest was the Monmouthshire Regiment, which possessed three battalions. The rest of the Territorial Force infantry regiments consisted of a single infantry battalion. These were the Cambridgeshire, Herefordshire and Hertfordshire Regiments; the Northern, Kent, Highland and Huntingdonshire Cyclist Battalions; and the Honourable Artillery Company. (The latter, which was one of the more eclectic organizations in the British Army, also provided two batteries of Royal Horse Artillery.)

A small proportion (14 out of 207) of the Territorial Force infantry battalions formed before the outbreak of war were designated as cyclist battalions. These were organized in much the same way as other Territorial Force infantry battalions, with eight companies and a machine-gun section. When serving at home, cyclist battalions were used as highly mobile reaction units – a means of quickly building up defensive strength in an area threatened by a hostile landing force. Those cyclist battalions that found themselves on the Western Front, however, were employed as ordinary infantry battalions.

Second-line Territorial battalions

In the seven years that passed between the founding of the Territorial Force (August 1907) and the outbreak of World War I (August 1914), the definitive mission of that organization had been the defence of the British Isles against foreign invasion. Because of this, neither officers nor men of the Territorial Force were obliged to serve outside of the boundaries of the United Kingdom. Indeed, it was widely assumed in the period prior to World War I that this clause in the enlistment contract was necessary in order to keep a sufficient number of suitable men in the Territorial Force. (In 1910, members of the Territorial Force were asked to voluntarily waive this restriction in their contracts and thus make themselves liable to serve anywhere in the world. By 1912, fewer than 20,000 of the 252,000 non-commissioned officers and men of the Territorial Force had chosen to respond to this call.) Once the war began, however, the mood within the Territorial Force underwent considerable change. Not only did a substantial percentage of individual Territorial Force soldiers volunteer for service abroad, but a good number of units volunteered en masse. By 25 August 1914, 70 of the 207 infantry battalions of the Territorial Force were composed entirely of men who had explicitly waived their right to remain at home.

Widespread enthusiasm for overseas service made possible a much more extensive use of Territorial Force battalions than had been called for in the original mobilization plans put into action on 4 August 1914. Territorial Force battalions that had volunteered for overseas service were soon being used to replace regular battalions in a variety of Imperial garrisons and to augment the

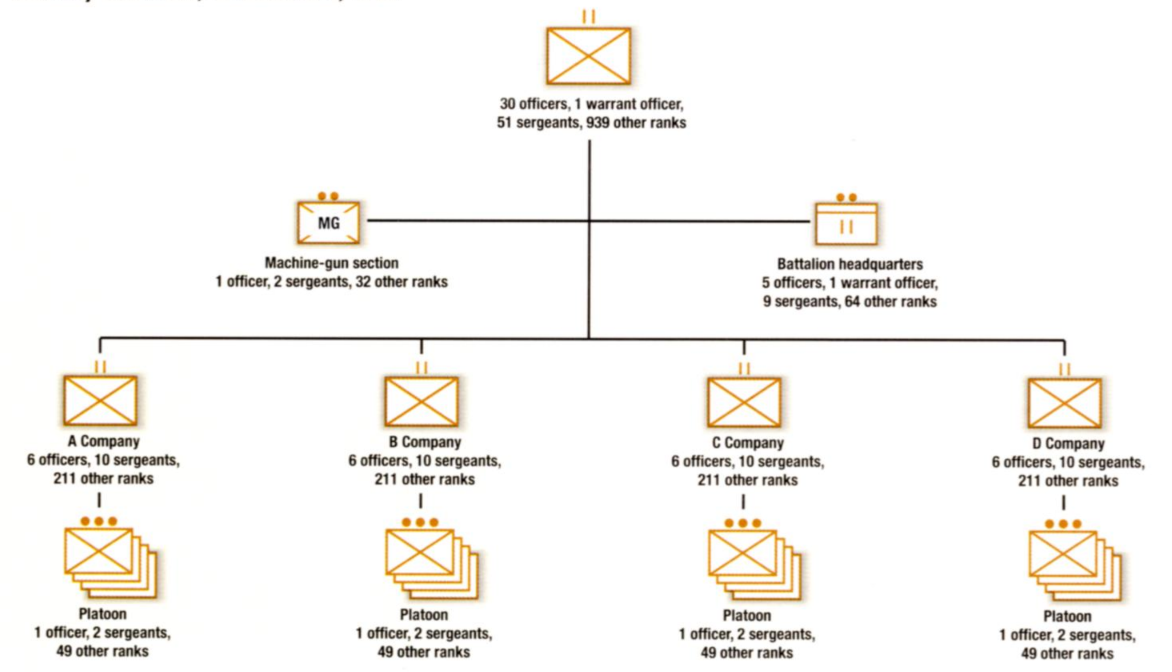
brigades of regular divisions serving on the Western Front. The fact that Territorial Force soldiers were continuing to volunteer for overseas service also meant that it was reasonable to contemplate the overseas deployment of all 14 divisions of the peacetime Territorial Force. Such deployment, however, threatened to deprive the United Kingdom of its chief means of dealing with the twin threats of invasion and insurrection. With that in mind, the War Office authorized the formation of a second contingent of the Territorial Force on 31 August 1914. Where infantry, mounted troops and field artillery were concerned, this second contingent was to be a carbon-copy of the original Territorial Force – a collection of mobile formations that could shift from one part of the United Kingdom to another in order to deal with a wide variety of threats.

Both first- and second-line battalions retained the names of the peacetime units that had given birth to them. They were further designated (and thus differentiated from each other) by fractional designations – the number '1' or '2' followed by a diagonal slash. Thus, the first-line battalion formed by the 5th Battalion, Highland Light Infantry became the 1/5th Battalion, Highland Light Infantry while the second-line battalion became 2/5th Battalion, Highland Light Infantry. Any additional titles borne by the peacetime Territorial Force battalion were retained by both of the wartime battalions. Thus, as the 5th Battalion, Highland Light Infantry was known as the 5th (City of Glasgow) Battalion, both the 1/5th and the 2/5th Battalions bore that additional title as well. Until large numbers of second-line Territorial Force battalions began to arrive on the Western Front, there was little practical need to distinguish first-line battalions from second-line battalions. As a result, many first-line battalions were able to dispense with the '1/' in front of their names for most of 1915 and a good part of 1916.

New Army infantry battalions

In theory, New Army units were part of the Regular Army. In practice, they had much more in common with units of the Territorial Force. That is to say, New Army units were thoroughly local institutions that had been grafted, in an ad hoc fashion, onto an essentially alien administrative structure. Thus, just as the number of first-line and second-line Territorial Force battalions belonging to an infantry regiment might vary from zero to 14, the number of New Army service battalions could range from two to 19. Similarly, just as Territorial Force units often bore names in addition to the names of their parent regiment, New Army units – and New Army infantry battalions in particular – often had special designations.

In terms of internal structure, New Army infantry battalions were similar to Regular Army battalions organized according to the War Establishments for 1914. The most obvious difference between the two patterns was the lack of officially designated musicians in New Army battalions. A more subtle difference lay in the rank worn by company commanders. In Regular Army battalions, all companies were supposed to be commanded by majors, with captains commanding only when no major was available. In New Army battalions, only the senior company commander of a battalion was a major. The other three ranked as captains.



At the start of the war, the War Office tried to discourage New Army battalions from forming bands. Nonetheless, martial music was so much a part of military life in the early 20th century that many orders to this effect fell on deaf ears. (NARA)

Soldiers of the 10th Battalion of the Northumberland Fusiliers march through the English countryside. Formed in September of 1914, this battalion was one of the 108 infantry battalions raised as part of the Third New Army (K3). (Marcus Cowper)

New Army units trained wherever they could find room. Here, a full-strength infantry company takes advantage of low tide at the seaside resort of Llandudno in Wales to conduct close-order drill. (Marcus Cowper)

Attempts to teach rifle marksmanship to the men of the New Armies were hampered by chronic shortages of both rifles and ammunition. Nonetheless, most commanders placed a very high value on shooting skills and exercised a great deal of ingenuity in finding ways of overcoming those shortages. (Marcus Cowper)

Pioneer battalions

Of the three basic units of the British Army – the infantry battalion, the artillery battery and the cavalry regiment – the easiest to improvise was the infantry battalion. It is thus not surprising that each of the New Armies contained far more infantry battalions than were needed to fill out their divisions. Early in December of 1914, the Army Council decided to convert some of these extra infantry units into 'pioneer battalions' – infantry units that also do much of the work that would otherwise be the exclusive province of the Royal Engineers. The infantry battalions selected for conversion were those in which a good percentage of the men were already familiar with such work. Ideally, half of the men in such battalions would have been miners or construction labourers in civilian life, with the rest having followed such physically demanding trades as masonry, carpentry, brick-laying and metal work.

In keeping with their dual mission, pioneer battalions were provided with both a full complement of infantry equipment (to include machine guns) and several wagons full of tools, explosives and other engineering supplies. Indeed, the only difference in the war establishments of the two types of battalions was the provision of those vehicles, horses and drivers associated with the engineering stores. In keeping with the time-honoured tradition that a soldier be given extra pay when set to dig for long periods of time, the non-commissioned officers and men of pioneer battalions were paid an additional two pence per day.

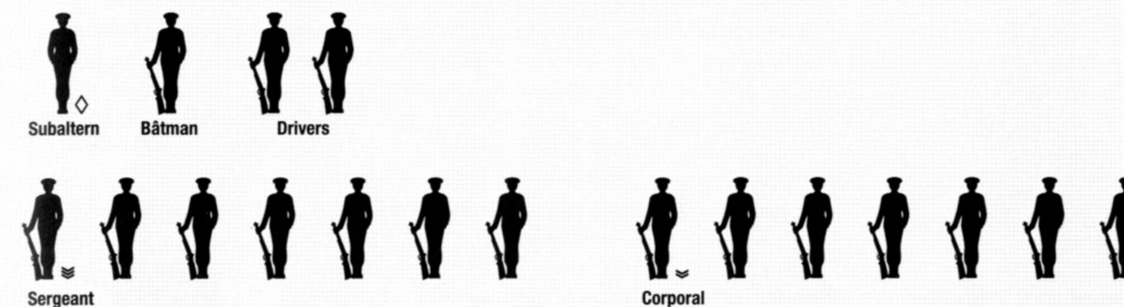
The idea of incorporating pioneers into the British Army had been widely discussed in the years before World War I. Lord Kitchener, who had been impressed by the achievements of the pioneer battalions of the Japanese and Indian armies, was very much in favour of forming similar units for the British Army. In 1912, while serving as chairman of a commission to examine the structure of the Royal Engineers, Kitchener recommended the enlistment of large numbers of pioneers to expand the number of Royal Engineer field companies. The other members of the commission, however, disagreed. They argued that the skilled tradesmen who served as sappers in the Royal Engineers would not mix well with 'labouring men'. As a result, the use of pioneers by the Royal Engineers was limited to a pilot programme to provide unskilled labour and apprentice telegraph operators to signals units.

Horatio H. Kitchener, 1st Earl Kitchener of Khartoum (1850–1915), was Secretary of State for War from 5 August 1914 until his death on 5 June 1915. The fact that so much of the peacetime leadership of the British Army went overseas at the start of the war gave Kitchener enormous power to shape the units raised to reinforce the Expeditionary Force. This power enabled him to put in place a number of reforms he had advocated before the war. These included the provision of a third engineer field company to each division and the creation of pioneer battalions. (National Portrait Gallery, P403)

Machine-gun sections

British infantry battalions were the first infantry units of any European Army to be provided with machine guns. As early as 1887, each infantry battalion then serving in an overseas posting was provided with a pair of early-model Maxim guns. In 1898, all infantry battalions, whether serving at home or abroad, were authorized two of the newer Maxim guns – machine guns that had been optimized for use with smokeless powder rifle cartridges. Nearly a generation would pass, however, between the first provision of machine guns to infantry battalions and the formation of permanent machine-gun sections. Indeed, it was not until the adoption of the four-company battalion in October 1913 that such units were established within the infantry battalions of the Regular Army. Prior to that, all of the personnel trained in the use of machine guns – the machine-gun officer, the machine-gun sergeant and the machine-gunners themselves – were distributed among the infantry companies. While this sometimes had the effect of allowing a large number of men to receive some exposure to machine guns, it made it difficult to weld the machine-gunners into a cohesive team.

This machine-gun section belonged to the 5th Battalion of the East Surrey Regiment, a Territorial Force battalion that had been sent to India in order to free a Regular Army battalion for service with the Expeditionary Force. Note the extra sergeant, the obsolescent long-pattern rifles and the use of pack mules rather than horse-drawn carts to carry the machine guns and ammunition. (Imperial War Museum, Q105708)



Machine guns played a rather modest part in the first month or so of fighting on the Western Front. This was partially a function of insufficient technical preparation – machine guns were often left idle because of a lack of spare parts – and partially a result of the absence of tactical savoir-faire. Once trench warfare set in, however, appreciation of the power of machine guns grew considerably. This consensus led the War Office to the decision that the number of machine guns in each infantry battalion ought to be doubled. Unfortunately, the pre-war supply of unallocated machine guns had been entirely used up to replace the weapons lost in August and September 1914, to bring the four Indian Army formations on the Western Front up to establishment, and to equip the six divisions of the First New Army. As a result, the fulfilment of this decision would have to wait until a sufficient number of new machine guns had been produced.

The onset of trench warfare led many divisions to detach cavalry machine-gun sections from their parent regiments and use them to reinforce the machine-gun sections of infantry battalions. After a few days in the trenches, the men of these sections were often hard to distinguish from their infantry counterparts. The wearing of ammunition bandliers suggests that these machine-gunners belong to a cavalry regiment. (Marcus Cowper)

Motor machine-gun batteries

The most unusual type of unit to serve in the Expeditionary Force during the first year of World War I was the motor machine-gun battery. As the name suggests, it was a fully motorized machine-gun unit with a strong connection to the Royal Artillery. What the name does not tell is that the motor machine-gun battery was one of the first fully motorized combat units in the world, and the very first to be mounted primarily on motorcycles.

Though a wide variety of motorcycles, touring cars, lorries and other vehicles were assembled for the use of the motor machine-gun batteries, the basic organization was the same. Each battery consisted of a headquarters and three sections. The headquarters was mounted in a touring car (for the commanding officer), a 3-tonne lorry (for ammunition and baggage) and five single-seat motorcycles. (Two of these were for the two subaltern officers of the battery, neither of whom had a permanent command. The other three were for the 'bâtmen,' who were simultaneously officers' servants and mounted orderlies.) Each section was made up of a sergeant (who rode a motorcycle and served as section leader), a small logistics team (which included a small truck, a corporal, a mechanic and a spare gunner) and two machine-gun teams. Each machine-gun team consisted of a machine gun and three gunners. One of the gunners rode a single-seat motorcycle. The other two rode in the same three-wheeled vehicle that carried the machine gun. This could either be a classic motorcycle/side-car combination or a converted motorcycle known as a 'tri-car.'

Between December 1914 and April 1915, seven motor machine-gun batteries were deployed to the Western Front. Once there, they quickly discovered that the trench warfare provided few opportunities for them to exploit their extraordinary mobility. Rather than dashing from one point on the battlefield to another, they often found themselves dismounted to provide reinforcements to battalion machine-gun sections. The type of men needed by motor machine-gun batteries, moreover, were in great demand by other sorts of units. The officers, who were originally drawn from the Royal Garrison Artillery, were needed by the heavy, siege and anti-aircraft batteries being formed. Signals units needed the motorcyclists while the Army Service Corps needed the lorry drivers. In April of 1915, the War Office abandoned the plan (which had been approved in November of 1914) to provide a motor machine-gun company to each infantry division. Instead, it limited the number of such units on the Western Front to 12 – the seven that were already there plus one additional battery for each of the five New Armies. Though this order was eventually modified to allow a few more motor machine-gun batteries to cross the Channel, the programme had lost its momentum. As a result, the motor machine-gun batteries would spend most of 1915 in an organizational limbo, their gun crews fighting in the trenches as ordinary machine-gunners while their vehicles sat idle in the rear.

Artillery batteries

Just as the battalion was the unit of account for the British infantry in 1914, the battery was the basic building block of British artillery. In terms of personnel, however, a battery was the rough equivalent of an infantry company. Commanded by a major (or senior captain), it consisted of five officers and nearly 200 non-commissioned officers and men. (The exact number of non-commissioned officers and men depended upon the particular type of artillery piece the battery was armed with.) In terms of the space it took up on a road, the battery was a little smaller than an infantry battalion. (The column formed by an infantry battalion, with men marching four abreast and a small number of wagons, was some 500m long. The column formed by the limbered artillery pieces, ammunition wagons and assorted other vehicles of an artillery battery required somewhere between 350 and 400m of road space.) In terms of the way it was handled on the battlefield, the battery occupied a position mid-way between that of an infantry company and an infantry battalion. Where the delivery of fire was concerned, the battery was an independent unit. However, when it came to the tactics of the infantry division, the battery was rarely deployed by itself. Rather, it usually went into battle as part of a larger artillery unit, the artillery brigade.

Artillery units took up a great deal of space on a road. A field artillery brigade, for example, consisted of 95 horse-drawn vehicles. As each of these required 20 yards of road-space, the entire unit would have been at least 2,000 yards (1,840m) long. (NARA)

Various types of artillery batteries (war establishment, 1914)
Horse artillery battery
5 officers*
200 men
6 artillery pieces
12 ammunition wagons
126 draught horses
102 riding horses
Field artillery battery
5 officers
198 men**
6 artillery pieces
6 ammunition wagons
122 draught horses
50 riding horses
Heavy battery, RGA
5 officers
161 men
4 artillery pieces
8 ammunition wagons
86 draught horses
26 riding horses
Siege battery, RGA
5 officers
177 men
4 artillery pieces
8 ammunition wagons
86 draught horses
17 riding horses

* *All batteries listed in this table were authorized one major, one captain and three subalterns.*
** *If armed with howitzers rather than field guns, a field artillery battery was authorized 197 men rather than 198.*

Service units of the Royal Artillery, 4 August 1914

Type	Designation	Regular Army	Territorial Force
Field artillery batteries	RFA	135	151
Horse artillery batteries	RHA	25	14
RGA companies (at home)	RGA	34	77
RGA companies (abroad)	RGA	52	0
Heavy batteries (coastal)	RGA	0	6
Heavy batteries (divisional)	RGA	6	14
Heavy batteries (India)	RGA	6	0
Mountain batteries (at home)	RGA	0	3
Mountain batteries (India)	RGA	9	0

Field batteries

Designed for mobile warfare in fairly open country, the original Expeditionary Force contained no mules at all. Once trench warfare set in, however, these sturdy creatures became increasingly popular with British units. Pound-for-pound, a mule could do more work than a horse and yet needed much less in the way of food, veterinary care and shoeing. Mules were also much less temperamental than horses, less likely to be startled by gunfire, more resistant to the elements and less susceptible to disease. (NARA)

In the decade before the start of World War I, the great organizational issue faced by the field artillery of the British Army was the number of guns in a battery. In the first decade of the 20th century, the armies of Europe had adopted three different approaches to the internal structure of field artillery batteries. The French Army, as well as most other European armies, adopted the four-piece battery at the same time that they obtained quick-firing artillery pieces. The Russian Army, which found guns easier to obtain than qualified battery commanders, fielded eight-gun batteries. The German and British armies found themselves in the middle ground between the two extreme solutions. When they adopted quick-firing field guns and light field howitzers they retained the six-piece battery structure that they had used with the previous generation of field pieces.

Like Continental batteries, British field artillery batteries were broken down into sections. Each of these sections was, like an infantry platoon, commanded by a subaltern officer (lieutenant or second lieutenant) and consisted of two field guns (or light field howitzers), the associated vehicles and horses, and the men who served the guns (the gunners) or drove the vehicles and cared for the horses (the drivers). Because there were three sections in a six-piece battery and because the British battery commander was provided with a captain who served as his second-in-command, a British battery had more officers than a contemporary French battery. While this allocation of extra officers struck

Field artillery battery, war establishment, 1914 (six guns or howitzers per battery)

	Officers	Sergeants	Rank and file
Major	1		
Captain	1		
Subalterns	3		
Battery sergeant major		1	
Battery quartermaster sergeant		1	
Sergeants		7	
Farrier sergeant		1	
Shoeing smiths			4
Saddlers			2
Fiters and wheelers			2
Trumpeters			2
Corporals			7
Bombardiers			11
Gunners*			76
Drivers**			74
Bâtmen			10
Total	5	10	188

* *If equipped with 4.5in. howitzers, each battery would have 75 gunners rather than 76 gunners.*
** *Four of the drivers were attached from the Army Service Corps.*

In 1914, the British Army was far more dependent upon animal transport than British civil society. For that reason, the great increase in the number of artillery units that took place during the first year of World War I resulted in a considerable shortage of shoeing smiths. To solve this problem, the War Office instituted a special programme to train men in the art of fitting iron shoes to the hooves of horses and mules. (NARA)

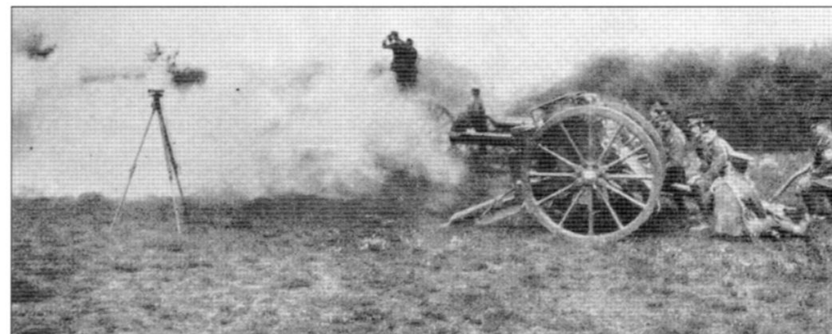
many Continental observers as wasteful, it had the advantage of making it easier for a British battery to detach an officer or two for service as a forward observing officer (FOO). Indeed, some British field howitzer batteries were using forward observing officers as early as the Boer War.

Not all British artillery officers were happy with the six-gun field battery. They argued that French-style four-piece batteries were far easier to command than six-piece batteries. The marching column formed by a four-piece battery was substantially shorter than the column formed by a six-piece battery. A four-piece battery therefore took far less time to get on or off a road. Firing positions for four-piece batteries, moreover, were substantially smaller than those needed by six-piece batteries. They were therefore more numerous and easier to find. Finally, such tasks as the registration of guns or howitzers on a particular target took less time with four pieces than with six. The counter-argument was that the six-piece battery was inherently more robust than a four-piece battery. It could lose one or two pieces and still perform its basic functions on the battlefield. The six-piece battery also economized on battery 'overhead' – majors, captains, battery sergeants-major, signallers and artificers.

Horse artillery

Horse artillery had been invented in the mid-18th century as a quick-reaction force that allowed an army commander to rapidly shift a small number of guns from one part of the battlefield to another. To this end, a large percentage of the men of horse artillery batteries were provided with saddle horses and taught to ride. This reduced the number of men who had to be carried in the horse-drawn vehicles of the battery and thereby increased the mobility of the unit as a whole. As armies got larger, horse artillery batteries tended to perform the same service for corps commanders. In the course of the 19th century, horse artillery batteries picked up the second mission of working closely with the cavalry. By the beginning of the 20th century, the second mission had eclipsed the first. As a result, all of the horse artillery batteries assigned to the original Expeditionary Force were assigned to cavalry formations.

The horse artillery batteries of the British Army tended to be larger than those of most other armies of the time. Where French and German horse artillery batteries were each provided with four field guns, the horse artillery batteries of the British Regular Army had six 13-pdrs. Where French and German horse artillery batteries had to make do with three officers, a British horse artillery battery had five. (Though armed with only four guns, the horse artillery batteries of the Territorial Force also had five officers.)



Though optimized for service with fast-moving cavalry formations, batteries of the Royal Horse Artillery were also trained to support infantry divisions. This training proved particularly valuable to the horse artillery batteries assigned to the 7th and 8th Divisions in the autumn of 1914. Here, a 13-pdr field gun belonging to one of these four batteries takes part in the bombardment that preceded the attack at Neuve Chapelle on 10 March 1915. (Marcus Cowper)

The Royal Garrison Artillery

Prior to 1899, all artillery batteries had belonged to a single organization known as the Royal Regiment of Artillery. In June of that year, the Regiment was divided into two separate branches – the 'Mounted Branch' and the 'Dismounted Branch'. Each of these branches constituted a 'corps', which meant that officers and men belonging to one branch were not routinely assigned to units belonging to the other. As a result, each branch began to develop its own organizational culture. The Mounted Branch, which encompassed the Royal Field Artillery and Royal Horse Artillery, became increasingly 'horsey' – more concerned with mobility than firepower. The Dismounted Branch, which received the more dignified name of the Royal Garrison Artillery, took a different route. Drawing upon the scientific tradition of the Royal Artillery and imitating its counterparts in other countries, its orientation was towards the perfection of the technique of artillery fire.

Before the war, the vast majority of units belonging to the Royal Garrison Artillery were coast defence companies. These used big guns of the kinds mounted on warships to protect harbours and other vulnerable points from hostile ships. They also manned the smaller ordnance that protected the big guns from smaller ships, aircraft and landing parties. In the course of the war, however, the coast defence companies found themselves eclipsed by two other kinds of Royal Garrison Artillery units – siege batteries and heavy batteries. Originally designed to participate in attacks upon permanent fortifications, siege batteries were equipped with the heaviest weapons that the British Army planned to use against targets on land. Most of these were heavy howitzers of various sorts. A few were heavy guns of the type used by coast defence companies. Heavy batteries operated in much the same way as field artillery units, but were armed with substantially larger artillery pieces. Most of these pieces were either the old 4.7in. (120mm) heavy gun or the newer 60-pdr (127mm) heavy gun. In a small number of cases, however, heavy batteries were equipped with other weapons – heavy guns of obsolete kinds and the same 6in. howitzers that armed many of the siege batteries.

Pack artillery units, whether the nine regular mountain batteries that were stationed in India at the start of the war or the three Territorial Force mountain batteries of the Highland Division, also belonged to the Royal Garrison Artillery. The logic behind this arrangement was historical. The mountain batteries of the British Army traced their origins to garrison artillery companies that had been converted into pack artillery during the Second Afghan War (1878–80).

Most of the heavy batteries that served with the Expeditionary Force during the first year of World War I were armed with the 4.7in. (120mm) heavy gun. This weapon, which was originally designed for use aboard warships, was characterized by a very long barrel, high muzzle velocity and an unfortunate tendency towards premature barrel wear. After firing 500 rounds or so, most 4.7in. guns became so inaccurate that they could not longer be used to fire over friendly troops. (Imperial War Museum, Q33652)

Regular batteries

At the outbreak of war in 1914, the Royal Field Artillery consisted of 135 service batteries and 12 reserve batteries. The service batteries, which were armed either with 18-pdr field guns or 4.5in. field howitzers, were fighting units. The reserve batteries were training and replacement organizations – the rough equivalent of the reserve battalions of regular infantry regiments. As such, the reserve batteries provided basic training to new gunners, advanced training for gun teams, and a place where horses could be accustomed to pulling guns and artillery wagons. The reserve batteries also served as a reservoir of trained men and broken-in horses.

Service batteries of the Royal Field Artillery were numbered consecutively, with the oldest bearing the number '1' and the most recently formed the number '135'. Howitzer batteries, which were numbered in the same series as field gun batteries, were further designated by the word 'howitzer' in their titles. Thus, the 9th and 17th Batteries, Royal Field Artillery, were field gun batteries while the 47th (Howitzer) and 60th (Howitzer) Batteries, Royal Field Artillery, were howitzer batteries. The reserve batteries bore numbers between 136 and 147. They were further designated by the word 'reserve' in their titles.

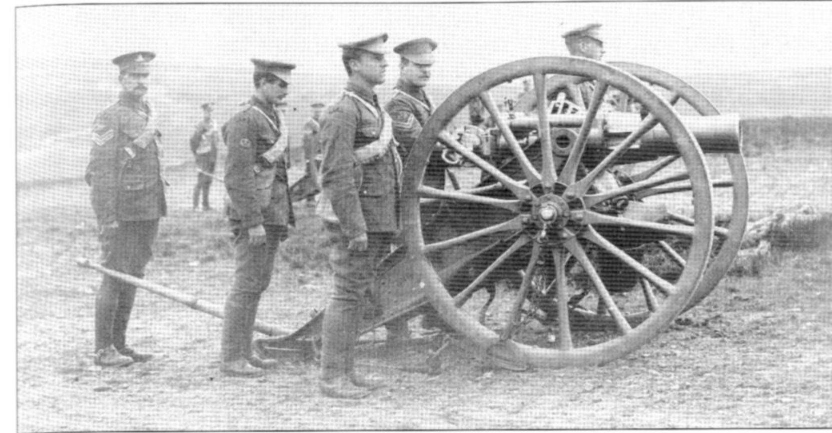
Batteries of the Royal Horse Artillery took their names from letters of the alphabet. There was thus a natural limit to the number of Royal Horse Artillery batteries that could be formed without creating a need for a new system of nomenclature. The Royal Horse Artillery, moreover, was already close to that limit when the war began. In August of 1914, there were 25 regular service batteries – A Battery through Y Battery – of the Royal Horse Artillery serving throughout the world. In October 1914, the 26th battery – 'Z Battery' – was formed, thereby exhausting the alphabet. It was therefore fortunate that only one additional regular battery was formed for the Royal Horse Artillery in the course of the war. (This battery, which served as a reserve battery stationed at home, was known as AA Battery. If any subsequent batteries had been formed, they would have been known as BB Battery, CC Battery and so forth.)

Before the outbreak of war, all units of the Royal Garrison Artillery, whether heavy batteries or siege companies or coast defence companies, were numbered in the same series. Thus, No. 22 Company was a coast defence company stationed at Sheerness, No. 23 Company was a siege company equipped with 6in. howitzers and No. 24 Battery was the heavy battery assigned to the 6th Division of the Expeditionary Force. Upon mobilization, this system was modified by the expansion of three siege companies into six siege batteries. These new siege batteries, as well as all but two of the regular siege batteries formed afterwards, were numbered in a new series that began with the 1st Siege Battery.

The pre-war system for numbering units of the Royal Garrison Artillery lived on the scheme for numbering the new heavy batteries after the start of the war. The first 15 of these were raised in the late summer and autumn of 1914. Composed of gunners made available by Regular Army coast defence companies and armed with 4.7in. (120mm) guns, these bore numbers between '109' and '123'.

Territorial Force artillery batteries

The Territorial Force began the war with a collection of artillery units comparable to that of the Regular Army. Roughly two-thirds of these units – 151 field artillery batteries, 14 horse artillery batteries, 14 heavy artillery batteries – were mobile units designed to accompany Territorial Force formations in the field. The rest – 76 companies of Royal Garrison Artillery and six additional heavy artillery batteries – were tied to the defence of specific ports throughout the British Isles. Though each had its parallel in the Regular Army, the mobile batteries of the Territorial Force were armed with different weapons. The weapons were those which the Regular Army had used prior to the adoption of the family of weapons centred on the 18-pdr field gun. The



The 5in. howitzer had been the standard field howitzer of the British Army until 1910, when it was replaced with the 4.5in. howitzer. After that, it soldiered on with the howitzer batteries of Territorial Force infantry divisions. The first 5in. howitzers to serve with the Expeditionary Force were the two howitzer batteries of the 46th (North Midland) Division, which arrived in France in March 1915. The last to leave did so in January 1916, after the issue of 4.5in. howitzers to the Territorial Force divisions on the Western Front had been completed. (John Wainwright)

field and horse artillery batteries of the Territorial Force were organized as four-piece rather than six-piece batteries. The coast defence units of the Royal Garrison Artillery had more in common with their Regular Army counterparts. As was the case with the regular companies, the weapons with which they were armed depended upon the particular station to which they were assigned.

The field batteries of the Territorial Force provided the divisional artillery to the 14 Territorial Force infantry divisions. Each of these divisional artilleries consisted of 12 batteries – nine field gun batteries, two howitzer batteries and one heavy battery. The field gun batteries were armed with the 15-pdr 'BLC' field gun. These were 15-pdr 'BL' ('breech-loading') field guns that had been modernized by the addition of a modern recoil mechanism. (The 'C' in 'BLC' stood for 'converted'.) Though these recoil mechanisms were similar to the ones used with 18-pdr field guns, the 15-pdr BLC was not a true 'quick-firing' field gun. This was because the weapon used the same separate-loading ammunition as the old 15-pdr gun. Thus, rather than loading the gun in one smooth motion, the gunners had to use two distinct movements to load the shell and the propellant cartridge in two. The howitzer batteries were armed with the 5in. field howitzer. This weapon, which had performed well in the Boer War, had a very primitive recoil mechanism. As a result, it jumped out of the battery each time it was fired and thus had to be returned to its firing position by hand before it could be fired again. The heavy batteries were armed with the 4.7in. gun. This was a naval weapon that had initially been adopted by the Royal Garrison Artillery as a mobile coast defence piece.

In addition to the 14 heavy batteries of its infantry divisions, the Territorial Force also included six heavy batteries of a different sort. These, which had the mission of defending coastal fortresses from land attack, were designed to occupy pre-selected positions in the vicinity of those fortresses. Because of this, they had far fewer horses, drivers and horse care specialists than mobile heavy batteries. Four of these batteries were armed with 4.7in. guns, two with 6in. howitzers.

The field and horse artillery batteries of the Territorial Force bore names that linked them to their home communities. For the most part, these battery names corresponded to those of countries. A few large cities, such as London and Glasgow, also gave their names to Territorial Force batteries. As most counties (or large cities) were home to more than one battery, batteries with the same name were distinguished from each other by numbers.

The naming system for the 14 heavy batteries assigned to Territorial Force infantry divisions was somewhat more complicated than the one used for field and horse artillery batteries. Eight of the 14 divisional heavy batteries had two names. The first was the name of the parent division. The second was the name of the home community. The divisional heavy battery of the Highland Division was thus the Highland (Fifeshire) Heavy Battery, Royal Garrison Artillery, while

that of the Welsh Division was the Welsh (Carnarvonshire) Heavy Battery, Royal Garrison Artillery. The remaining six heavy batteries had but one name. This was because the name of the parent division of each and the name of its associated community were either the same or very similar.

The order that caused Territorial Force infantry battalions to split into first-line and second-line units also applied to many Territorial Force artillery batteries. As was the case with infantry battalions, the first-line batteries formed by this process were either known by the name of the parent unit or by the name of the parent unit preceded by the number '1'. Similarly, the second-line batteries bore the name of the parent unit preceded by the number '2'.

New Army artillery batteries

The organizers of the two armies in existence in the United Kingdom at the start of World War I – the original Expeditionary Force and the peacetime Territorial Force – had a comparably easy job. They not only had reliable data as to the resources available to them, they had had long years of peace to remedy deficiencies in the recruiting of men and the manufacture of weapons. By way of contrast, the organizers of the New Armies were faced with ever-changing estimates of available resources and a great deal of pressure to get forces to the front in the shortest possible time. In addition, the officials in charge of raising the New Armies had to deal with frequent changes of plan as well as a major shift in organizational philosophy. The only silver lining in this great cloud of uncertainty was the consistent policy of limiting the types of units to be formed as part of the New Armies. Where both the Territorial Force and Regular Army included a wide variety of units, the New Armies were to include only those units that were commonly found in infantry divisions. Where artillery was concerned, this meant that New Armies would be entirely free of horse artillery batteries and siege batteries. Put another way, the only types of batteries formed as part of the New Armies were field batteries and heavy batteries – field batteries armed with 18-pdr field guns, field batteries armed with 4.5in. howitzers and heavy batteries armed with 60-pdr heavy guns.

Field artillery battery, war establishment for the New Armies, 1914 (four guns or howitzers per battery)

	Officers	Sergeants	Rank and file
Captain	1		
Subalterns	3		
Battery sergeant major		1	
Battery quartermaster sergeant		1	
Sergeants		5	
Farrier sergeant		1	
Shoeing smiths			3
Saddlers			2
Fitters and wheelers			2
Trumpeters			2
Corporals			5
Bombardiers			9
Gunners			47
Drivers*			46
Bâtmen			8
Total	4	8	115

** Four of the drivers were attached from the Army Service Corps.*

The earliest plans for the New Army infantry divisions called for them to be provided with field artillery in exactly the same manner as infantry divisions of the original Expeditionary Force. Each New Army division would thus have a divisional artillery that consisted of 13 batteries – nine field batteries of 18-pdr field guns, three field batteries of 4.5in. howitzers and one heavy battery of 60-pdr heavy guns. As was the case with the divisional batteries of the original Expeditionary Force, the field batteries were to have six guns or howitzers and the heavy batteries four guns. In keeping with this philosophy of making New Army divisions look as much as possible like the divisions of the original Expeditionary Force, New Army field batteries were initially numbered in the same sequence as field batteries of the peacetime Regular Army. As the most junior field battery of the Regular Army was the 147th Battery, the most senior field battery of the New Armies was to be the 148th Battery.

It was not long after the first plans for the New Armies were promulgated that a critical defect became apparent. The organization of Regular Army field artillery batteries placed an enormous burden upon battery commanders, who were simultaneously responsible for the tactical employment of their unit and the technical details of fire control. In peacetime, finding men with sufficient knowledge and experience to lead the small number of Regular Army field artillery batteries had been hard enough. With most of those officers already serving with the Expeditionary Force, supplying qualified commanders for New Army field batteries was proving impossible. In December 1914, therefore, the War Office decided to impose an entirely new organizational scheme upon the field artillery of the New Army divisions. Rather than being composed of three six-piece batteries, each New Army field artillery brigade would be broken down into four much smaller batteries. Armed with four 18-pdr field guns or 4.5in. howitzers, these smaller batteries would enjoy much less autonomy than the larger batteries of the Regular Army. Because of this, they could be commanded by officers with much less in the way of skill or experience than Regular Army battery commanders. At the same time, the few experienced commanders who were available could be promoted to the rank of lieutenant colonel and given the command of one of the new brigades.

To reflect the new relationship between batteries and brigades, New Army field artillery batteries lost their unique numbers. Henceforth, they would be identified, by letter of the alphabet, as sub-units of a particular field artillery brigade. In other words, the battery had become an element of the field artillery brigade in much the same way that a squadron was an element of the cavalry regiment or the company was an element of the infantry battalion.

New Army heavy batteries

As a rule, all New Army units were of types found in infantry divisions. There were thus New Army infantry battalions, field artillery brigades and engineer field companies, but no New Army cavalry regiments or cyclist battalions. The exception that proves this rule is provided by the 27 heavy batteries created as part of the first four New Armies. These were initially intended to be an organic part of the New Army divisions, with each New Army heavy battery performing the same function as divisional heavy batteries of Regular Army and Territorial Force divisions. In January 1915, however, the War Office decided to remove heavy batteries from all infantry divisions. Heavy batteries of divisions already on the Western Front were grouped together to form heavy artillery brigades. A few of those belonging to divisions that were still in the United Kingdom were provided with 4.7in. guns and sent overseas. Most, however, were assigned to coast defence duties. This allowed the gunners to gain experience with a variety of artillery pieces while they waited for the new 60-pdr guns to emerge from the factories.

At first, New Army heavy batteries bore the same number as their parent divisions. Thus, the 9th Heavy Battery was originally formed as part of the 9th (Scottish) Division, the 16th Heavy Battery was part of the 16th (Irish) Division, and the 22nd Heavy Battery was part of the 22nd Division. Though this scheme had the virtue of simplicity, it soon ran afoul of the naming scheme for Regular Army heavy batteries. That is to say, the fact that some Regular Army heavy batteries bore numbers 24, 26, 31 and 34 meant that four heavy batteries of the Third and Fourth New Armies would have to find other names. The first solution to this problem – adding the word 'new' in front of the battery number – soon proved unwieldy. The second solution was to number the affected New Army batteries in the same series as the Regular Army heavy batteries formed soon after the start of the war. As the most junior of these batteries bore the number '123', the senior of the New Army batteries in need of a number became the 124th Heavy Battery.

Anti-aircraft detachments

A number of weapons belonging to the original Expeditionary Force – machine guns, field guns and heavy guns – had the potential to serve as anti-aircraft weapons. At times, they were pressed into service as such. The units that used these weapons, however, had neither the personnel nor the auxiliary equipment – anti-aircraft mountings, special range finders and the like – needed for effective anti-aircraft work. It did not take long for the War Office to recognize this deficiency and take the first steps towards the creation of proper anti-aircraft defences for the Expeditionary Force. On 21 August 1914, the War Office ordered the Royal Garrison Artillery to provide each division going to the Western Front with an anti-aircraft detachment. Consisting of one officer and 14 other ranks, these detachments were armed with a 1-pdr (37mm) Maxim pom-pom gun, carts for ammunition and a total of nine horses.

The Maxim 'pom-pom' gun was an overgrown machine gun that fired 37mm (1.45in.) explosive shells. Sold around the world as an alternative to light field artillery, it was a great disappointment to most of those who tried to use it in that role. In the years between 1908 and 1912, the rapid development of military and naval aviation gave it a second lease of life as both armies and navies pressed it into service as an anti-aircraft gun. This particular weapon protected a German naval unit on the Belgian coast from attacks by low-flying aircraft. (Imperial War Museum, Q49188)

The Maxim pom-pom could either be described as a very large machine gun or a very small field gun. Like a machine gun, it was a belt-fed weapon with a fully automatic action. Like a field gun, it fired shells rather than bullets. As is often the fate with weapons that fail to fit neatly into existing categories, the 'pom-pom' had experienced considerable difficulty finding an organizational home in the British Army. Purchased in haste during the Boer War, the pom-pom guns had initially been assigned, willy-nilly, to infantry and cavalry units. After the Boer War, they migrated to the machine-gun sections of cavalry and Yeomanry regiments, with each section getting one pom-pom and one rifle-calibre Maxim gun. This, however, proved unwieldy and the mounted regiments traded their pom-poms for a second rifle-calibre Maxim gun. Though there were occasional calls for the issue of pom-poms as a substitute for some or all of the field guns of the Territorial Force, the weapon remained unemployed until the start of World War I.

The Maxim pom-pom was not particularly effective as an anti-aircraft weapon. As a result, the plans to provide each infantry division on the Western Front with its own anti-aircraft detachment were soon scrapped. By the start of 1915, the detachments that had been attached to divisions were withdrawn. The detachments remaining on the Western Front after this point lived a life similar to that of the mountain batteries. Often ignored and invariably misunderstood, they moved from one formation to another in the hope of finding something useful to do.

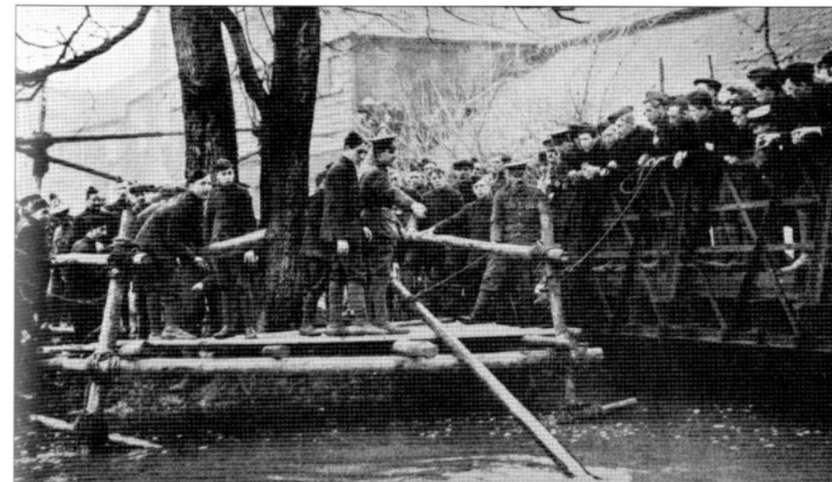
Mountain batteries

At the beginning of World War I, the British Army possessed 12 mountain batteries. These were artillery units armed with light artillery pieces that could be broken down into loads small enough to be carried by pack animals. Nine of the mountain batteries were Regular Army units of the Royal Garrison Artillery. Optimized for service on the Northwest Frontier of India, they had no place in the original Expeditionary Force. In the winter of 1915, however, two of these mountain batteries (the 5th and the 7th Mountain Batteries) were sent to the Western Front. There they lived a gypsy life, moving from one formation to another in the hope of finding useful work.

The remaining three mountain batteries formed the pack artillery brigade of the Highland Division of the Territorial Force, where they took the place of one of the three field artillery brigades. Rather than accompanying the Highland Division to France, however, two of the Highland mountain batteries found themselves with orders for Gallipoli while the third was converted into a training unit. As it took quite some time to find a field artillery brigade to fill the resulting gap, the Highland Division spent much of 1915 with neither a third field artillery brigade nor its mountain artillery brigade.

Engineer companies

Any attempt to place boundaries upon the work of the Royal Engineers is a dangerous enterprise. The moment the outer limit is marked, some sapper will take up the challenge and push back the frontier. Nonetheless, it is safe to say that the work of the Royal Engineers during the first year of World War I was divided into two broad categories. The first of these was military signalling – the work that would later be done by the Royal Corps of Signals. The second category was the broad realm of military engineering, a universe that included such varied tasks as the building of military railway, the erection of temporary bridges, the construction of field fortifications and the defence of permanent fortresses. Military signalling was the business of signal units – divisional signal companies and the like. Most other sorts of military engineering were the work of engineer companies.



One of the most important tasks of the Royal Engineer field companies was the building of temporary bridges over rivers and canals. In this picture, apprentice sappers of a New Army field company learn the art of creating such a structure from locally procured materials. (Marcus Cowper)

Engineer companies of the British Army, 4 August 1914

Type	Regular Army abroad	Regular Army at home	Territorial Force	Special Reserve
Field	3	13	28	
Fortress	15	12	43	
Railway		2		3
Coastal battalion		2		
Survey		3		
Works (lines of communication)		1		
Siege				2

Of the many types of engineer companies in the Regular Army of 1914, the most common were field companies and fortress companies. Field companies fulfilled the military engineering tasks that were routinely required by infantry divisions. These included the building or improvement of roads and bridges, the digging of field fortifications, the demolition of buildings and obstacles, strengthening captured positions, ensuring the supply of water and providing for the sanitary needs of formations. Fortress companies performed the same sort of services that field companies did. However, instead of providing these services to divisions in the field, they provided them to forces that were involved in fortress warfare. Fortress companies also had the ability to build light railways, handle searchlights, construct siege works of various sorts, set up simple telephone networks, maintain the electrical systems of fortresses, and control floods. Because the British Army of the early 20th century placed a low priority on developing its own ability to attack hostile fortresses, the bulk of the work of the fortress companies was oriented towards the defence of fortresses. There were, nonetheless, two Regular Army fortress companies – the 20th and the 42nd – that specialized in siege warfare.

Of the handful of engineer companies that were neither field nor fortress companies, three – one lines of communication company and two Coastal Battalion companies – had much in common with field and fortress companies. The 29th Company (Lines of Communication) provided all those engineering services (except those associated with railways) needed to maintain the logistics lifeline between the Expeditionary Force and its base. The Coastal Battalion companies were very similar to fortress companies. Their particular area of expertise was the handling of the powerful searchlights that were aimed out to sea to help coastal defence artillery batteries find their targets at night. (The Coastal Battalion was divided into two numbered companies – the 16th and 49th – as well as several unnumbered detachments.) Railway and survey companies were more highly specialized. Railway companies built and maintained (but did not run the trains for) military railways. Survey companies made highly detailed maps. In time of peace, they were seconded to the Agriculture Department so that they might practise their skills, provide useful maps of the British countryside, and relieve the military budget of the expense of maintaining them.

There were no railway, survey, coastal battalion or lines of communications companies in the Territorial Force. Rather, all Territorial Force engineer companies were either field companies or fortress companies. The field companies of the Territorial Force were identical to those of the Regular Army. The Territorial Force fortress companies, however, were somewhat different. Where the Regular Army had but one type of fortress company, the Territorial Force had two. Works companies consisted of engineers who made hasty repairs to the permanent structures of a fortress and erected field works to augment those structures. Electric light companies provided the crews to operate the searchlights belonging to fortresses and other fixed installations.

The two Special Reserve engineer regiments – the Royal Anglesey Royal Engineers and the Royal Monmouthshire Royal Engineers – provided a total of seven engineer companies. Three were railway companies, two were siege companies and two were depot companies. The railway companies were similar to the three railway companies of the Regular Army. The siege companies existed to serve the special needs of the siege train. (As these included the building of narrow-gauge railway lines, the connection between the siege companies and the railway companies was a fortunate one.) Until needed, these siege companies were either to serve as fortress companies in the defended ports of Ireland or as a reinforcement to the 29th Company (Line of Communications). The depot companies were reserve units that could also serve as fortress companies.

Upon mobilization, two Regular Army field companies joined each of the infantry divisions of the original Expeditionary Force. Other Regular Army engineer companies – the line of communications company and two railway companies – joined the Expeditionary Force as General Headquarters Troops. By the end of 1914, an additional field company had been added to the establishment of each infantry division and the number of non-divisional engineer companies had increased to 15. (Seven of these were railway companies, four were siege companies, four were fortress companies.) The extra field companies were Territorial Force field companies that had been separated from their peacetime formations. (The places left vacant in the parent Territorial Force divisions were filled by second-line Territorial Force field companies.) The fortress companies were existing Regular Army fortress companies that had been transferred to the Western Front. (Two of these were the fortress companies that had been trained as siege companies before the war. The other two were fortress companies that had been serving overseas before the war.) The siege companies were formed by the doubling of the pre-war siege companies of the two Special Reserve engineer regiments. Two of the railway companies were pre-war Regular Army units. Three were from the two Special Reserve engineer regiments. Two were recently created wartime units, the 109th and 112th Railway Companies.

In the course of 1915, the number of engineer units in the Expeditionary Force grew with the force as a whole. New divisions arriving on the Western Front did so with three field companies. (In the case of New Army divisions, these were raised in the same manner as other New Army units – from scratch. In the case of Territorial Force divisions, the field companies were a mixture of first-line and second-line units.) Outside of divisions, the existing engineer companies were reinforced by Territorial Force and New Army fortress companies. Like the other siege and fortress companies, these were used in both the front lines (to assist the field companies) and the rear areas (to work on infrastructure).

The 51 engineer companies of the Regular Army were numbered in a series that ran from 1 through 59. (The missing numbers had belonged to companies that had been disbanded after the system had been put in place.) New Army field and fortress companies were also numbered in this series, as were Regular Army companies raised after August 1914.

The 81 engineer companies of the Territorial Force had both names and numbers, with most field companies being named for their parent divisions and most fortress companies for the place that they defended. When these companies formed their second-line counterparts, those second-line units were named in the same way as other second-line units – with the name of the parent unit preceded by '2/'. The Special Reserve companies were numbered within their respective regiments. The companies of the Royal Monmouthshire Royal Engineers were thus the 1st (Royal Monmouthshire) Depot Company, 2nd (Royal Monmouthshire) Railway Company, 3rd (Royal Monmouthshire) Railway Company and 4th (Royal Monmouthshire) Siege Company.

The cavalry regiment

The term 'regiment' gives endless trouble to those trying to make sense of the British Army of World War I. A British infantry regiment, which was a purely administrative organization with no role on the battlefield, was hard enough to understand. The Royal Regiment of Artillery, which encompassed the entirely artillery of the British Army, was even more incomprehensible. Indeed, the only type of British regiment that bore any resemblance to regiments in other armies of the time was the cavalry regiment. At a time when most of the world's cavalry regiments could put somewhere between 500 and 600 horsemen into the field, British cavalry regiments had an authorized wartime strength of 543 officers, warrant officers, non-commissioned officers and men. (Cavalry regiments serving in India at the outbreak of war were substantially larger. They had an all-ranks' authorized strength of 624.)

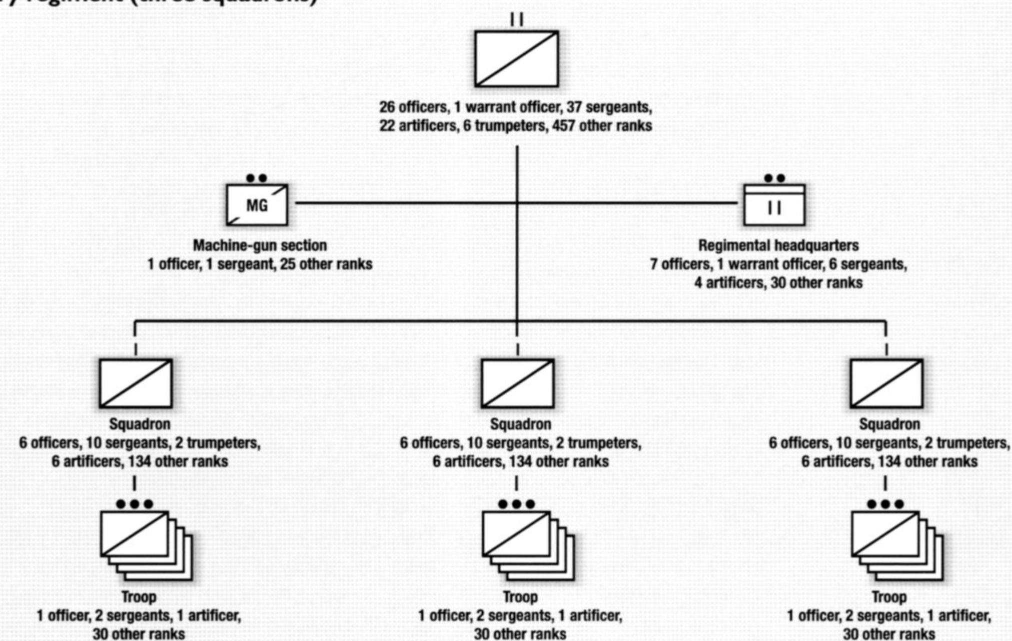
Distribution of regular cavalry regiments, August 1914–July 1915

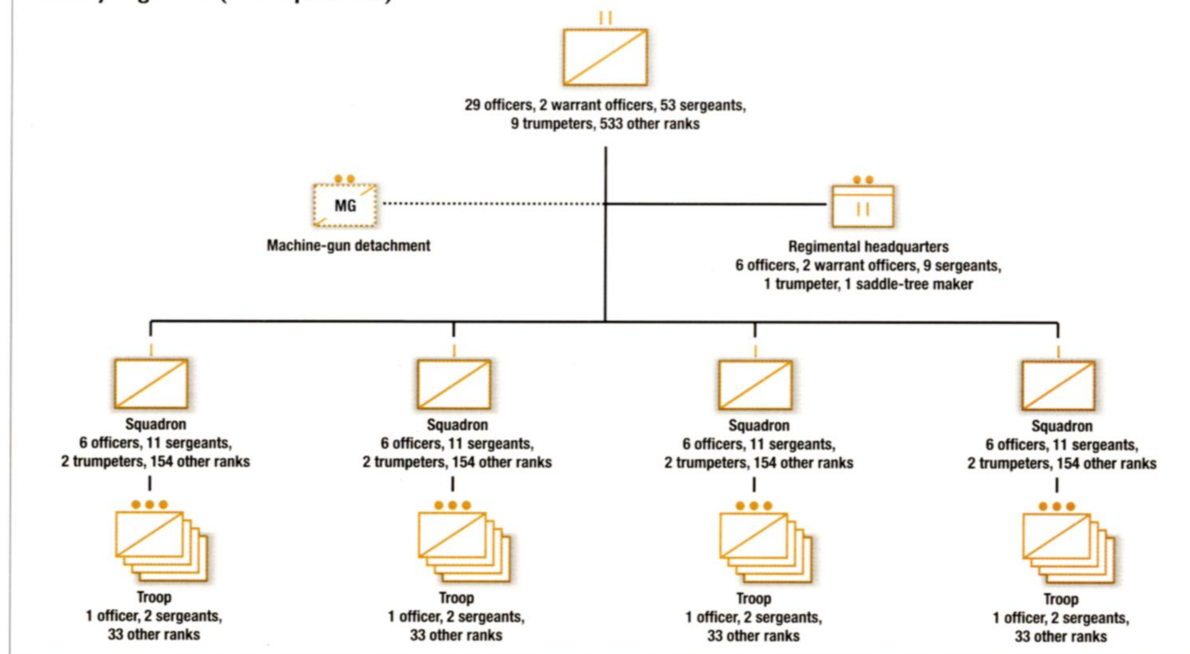
Regiment	Type	Theatre	Assignment
1st Life Guards	Household cavalry	Western Front	Cavalry brigade
2nd Life Guards	Household cavalry	Western Front	Cavalry brigade
Royal Horse Guards	Household cavalry	Western Front	Cavalry brigade
1st Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
2nd Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
3rd Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
4th Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
5th Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
6th Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
7th Dragoon Guards	Cavalry of the line	Western Front	Cavalry brigade
1st Dragoons	Cavalry of the line	Western Front	Cavalry brigade
2nd Dragoons	Cavalry of the line	Western Front	Cavalry brigade
3rd Hussars	Cavalry of the line	Western Front	Cavalry brigade
4th Hussars	Cavalry of the line	Western Front	Cavalry brigade
5th Lancers	Cavalry of the line	Western Front	Cavalry brigade
6th Dragoons	Cavalry of the line	Western Front	Cavalry brigade
7th Hussars	Cavalry of the line	India	
8th Hussars	Cavalry of the line	Western Front	Cavalry brigade
9th Lancers	Cavalry of the line	Western Front	Cavalry brigade
10th Hussars	Cavalry of the line	Western Front	Cavalry brigade
11th Hussars	Cavalry of the line	Western Front	Cavalry brigade
12th Lancers	Cavalry of the line	Western Front	Cavalry brigade
13th Hussars	Cavalry of the line	Western Front	Cavalry brigade
14th Hussars	Cavalry of the line	India	
15th Hussars	Cavalry of the line	Western Front	Infantry divisions
16th Lancers	Cavalry of the line	Western Front	Cavalry brigade
17th Lancers	Cavalry of the line	Western Front	Cavalry brigade
18th Hussars	Cavalry of the line	Western Front	Cavalry brigade
19th Hussars	Cavalry of the line	Western Front	Infantry divisions
20th Hussars	Cavalry of the line	Western Front	Cavalry brigade
21st Lancers	Cavalry of the line	India	

With each horse requiring some two yards (2m) of road space, a cavalry regiment in single file formed a column that was nearly a mile (1,600m) long. (Some 1,200 yards were needed to accommodate the horsemen while the rest was taken up by the supply wagons and pack animals.) (Marcus Cowper)

Cavalry regiments were the rough equivalents of infantry battalions, with officers, warrant officers and non-commissioned officers of the same ranks and titles serving in the headquarters of both types of unit. The same can be said for cavalry squadrons and infantry companies and, to a lesser extent, of cavalry troops and infantry platoons. The big difference between the headquarters of cavalry units and their infantry counterparts was the presence of horse-care specialists at each echelon within the cavalry regiment. The senior of these was the regimental veterinary officer. He was assisted by the farrier quartermaster-sergeant, the farrier sergeant of each squadron and the shoeing smith of each troop. The maintenance of saddles and other items of harness was likewise the business of the saddler sergeant and saddle-tree maker (who belonged to the regimental headquarters) and each squadron's saddler.

Cavalry regiment (three squadrons)





Regular cavalry regiments

At the outbreak of war there were 31 cavalry regiments in the British Army. Three of these were regiments of Household Cavalry, the mounted equivalent of the Brigade of Guards. Twenty-eight were regiments of cavalry of the line, the 'ordinary' cavalry regiments of the British Army. In the course of the last five months of 1914, all but three of these cavalry regiments would find their way to the Western Front. (The three that were not sent to the Western Front spent 1914 in India. In 1915, two of those regiments went to Mesopotamia.) Of the 28 regiments deployed to the Western Front in 1914, only two were used to provide divisional cavalry squadrons to infantry divisions. The remaining 26 served as 'army cavalry'. That is to say, they were assigned to cavalry brigades that, in turn, were assigned to cavalry divisions. After the onset of trench warfare, these cavalry divisions were kept in the rear of the British-held sectors of the front, training for the day when a rupture of the German lines would allow them to resume their traditional role of striking deep into the heart of enemy territory to disrupt enemy communications, threaten enemy flanks, and discover the location of hostile formations.

Yeomanry regiments and regiments of horse

In the British Army of 1914, the term 'cavalry' was restricted to mounted units of the Regular Army. Horse-mounted regiments of other contingents, though the functional and organizational equivalent of cavalry regiments, were therefore given other names. Fifty-five of these were Yeomanry regiments of the Territorial Force. Three were Special Reserve 'regiments of horse'.

Soon after the outbreak of war, the number of Yeomanry regiments increased considerably. In August 1914, two new Yeomanry regiments – the Welsh Horse Yeomanry and the 3rd Scottish Horse – were formed. Later that month, all Yeomanry regiments formed second-line counterparts. Thus, by the start of September 1914, 114 Yeomanry regiments were available for the defence of the Great Britain. The expansion of one of the mounted regiments of the Special Reserve followed the same pattern. In August 1914, King Edward's Horse formed a sister regiment known as the 2nd Regiment, King Edward's Horse. The two regiments of Irish Horse, however, did not double themselves at the start of the war. Their expansion was delayed until 1915, when they began to raise additional squadrons for overseas service.

First-line Yeomanry regiments served in a wide variety of ways, with most going overseas before the end of the first year of the war. Twelve Yeomanry regiments were broken up to provide cavalry squadrons to infantry divisions on the Western Front. Five served alongside Regular Army cavalry regiments in cavalry brigades. Forty went to the Eastern Mediterranean, where 31 served as dismounted units in the Gallipoli campaign. All second-line Yeomanry regiments remained at home throughout the war, remaining horsed through to the end of 1915.

At the start of the war, three squadrons of Irish Horse (two from the North Irish Horse and one from the South Irish Horse) went to France with the Expeditionary Force as 'escort cavalry'. (As imagined in the years before the war, escort cavalry provided security to headquarters of formations larger than divisions.) Along with the three squadrons of Irish Horse initially assigned to home defence duties, the six squadrons of Irish Horse formed in 1915, and the six squadrons of King Edward's Horse, these 'escort' squadrons soon found a more permanent home as divisional cavalry squadrons for infantry divisions.

Divisional cavalry squadrons

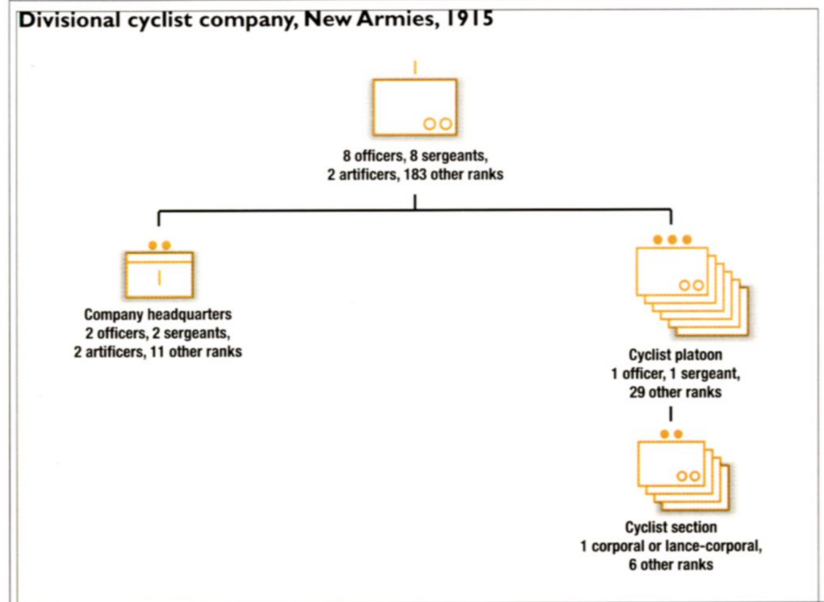
Before being sent to the Western Front, nearly all British infantry divisions of 1914 or 1915 were provided with a single squadron of divisional cavalry. The squadrons for the six Regular Army divisions of the original Expeditionary Force came from two Regular Army cavalry regiments – the 15th Hussars and the 19th Hussars. The squadrons for the improvised Regular Army infantry divisions (7th, 8th, 27th, 28th and 29th Divisions), the Territorial Force infantry divisions and the New Army divisions all came from Yeomanry regiments. At first, the 7th and 8th Divisions were each provided with a complete Yeomanry regiment. In April 1915, however, these regiments were replaced by single squadrons.

The cavalry and Yeomanry regiments that provided divisional cavalry squadrons were organized in the same manner as other war-strength cavalry and Yeomanry regiments. That is to say, each consisted of a regimental headquarters, a machine-gun section, and three service squadrons. If possible, the regimental headquarters continued to provide the same sort of services as the headquarters of an intact regiment – medical care for the men, veterinary care for the horses, and specialized assistance for the squadron tradesmen. To this end, regimental commanders tried to find a location for their headquarters that was not too far away from the divisions to which their component squadrons were attached.

Divisional cyclist companies

Prior to going overseas, the first seven infantry divisions to serve on the Western Front had each formed a small cyclist company. Designed to work closely with the divisional cavalry squadrons, these companies were charged with conducting reconnaissance patrols of their own as well as 'stiffening' those of the horse cavalry. In the first two months of fighting in France and Flanders, the cyclist companies proved so successful that the War Office decided to double their size. Where the cyclist companies of the first seven infantry divisions had consisted of 100 men (all ranks), the cyclist companies of all subsequently formed divisions – whether Regular Army, Territorial Force or New Army – were to have a war establishment of 200 men (all ranks). These were to be organized into a small company headquarters and six small platoons.

The men who filled the ranks of the cyclist companies were initially taken from the component infantry battalions of each division. In the case of Regular Army battalions, the men most suitable for transfer to the cyclist companies would have been those already trained as infantry scouts. As such, they would



have been selected for their intelligence, initiative and marksmanship. In addition, they would have been taught such skills as the conduct of patrols and the giving of reports. Men of Territorial Force and New Army infantry battalions rarely had a chance for extensive peacetime training as scouts. What they did offer, however, was extensive familiarity with bicycles. Cycling was a popular pastime in the early 20th century as well as an important means of transportation. Finding men who could ride and care for bicycles thus presented very few difficulties to the officers forming cyclist companies for New Army and Territorial Force divisions.

Brigades

In the British Army of 1914, the term 'brigade' was used for three very different types of unit. An infantry brigade was composed of four infantry battalions. A cavalry brigade was made up of three cavalry regiments. (In many cases, cavalry brigades also possessed a battery of horse artillery.) An artillery brigade consisted of two, three or four artillery batteries of similar types. In sharp contrast to infantry and cavalry brigades, which were normally commanded by brigadier generals, an artillery brigade was led by a lieutenant colonel. An artillery brigade thus had as much in common with an infantry battalion or cavalry regiment as it did with a brigade of any other sort.

British brigades were different from their counterparts in most other armies of the time. In France and Germany, for example, an infantry brigade consisted of two infantry regiments, each of three infantry battalions. (A German or French infantry brigade was thus 50 per cent larger than a British infantry brigade.) In the French and German armies, a cavalry brigade had but two cavalry regiments. As such, it was a third smaller than a British cavalry brigade. A German field artillery brigade was composed of two field artillery regiments, each of six batteries. It was thus four times the size of a British field artillery brigade. A French field artillery brigade was larger still. Encompassing all of the field artillery of an entire army corps, it consisted of one large regiment (of 12 batteries) and two small regiments (of nine batteries each). It was ten times the size of a British field artillery brigade.

If there was any logic to the use of the same term to describe such different organizations it was that brigades were the largest units that belonged exclusively to a particular arm. Organizations larger than brigades were either combined-arms formations (such as divisions or army corps) or coordinating headquarters (such as the headquarters of a divisional artillery). Within the infantry division, moreover, there was a certain symmetry between the three infantry brigades and the three field artillery brigades that were armed with field guns. Beginning in 1907 the British Army began the practice of establishing a formal relationship between infantry brigades and field gun brigades. Under normal circumstances, an infantry brigade would cooperate with the field gun brigade with which it was affiliated. In cases where an infantry brigade would be given a mission – such as advanced guard, flank guard or rear guard – that caused it to become separated from its parent division, its affiliated field gun brigade would go along with it. The ammunition column of each field gun brigade also carried reserves of small-arms ammunition for its affiliated infantry brigade.

In sharp contrast to the headquarters of higher formations, the headquarters of an infantry brigade was a small, rather informal organization that required very little in the way of facilities or support. Here, the headquarters of the 21st Infantry Brigade, which is waiting to exploit the initial breakthrough of the German position at Neuve Chapelle, has established itself in a haystack. In addition to providing warmth and concealment, this haystack offered a very good view of the battlefield. (Imperial War Museum, Q49219)

Infantry brigades

In most cases, a British infantry brigade of the first year of World War I consisted of a headquarters and four infantry battalions. There were times, however, when one or two extra battalions were temporarily assigned to a single brigade. Some of these extra battalions belonged to Territorial Force

Infantry brigade headquarters, war establishment, 1914

	Officers	Sergeants and clerks	Rank and file
Brigadier general	1		
Brigade major	1		
Staff captain	1		
Veterinary officer	1		
Army postal service			3
Military mounted police		1	4
Clerk		1	
Acting quartermaster sergeant		1	
Cook			1
Bâtmen			7
Drivers			7
Total	4	3	22

divisions that were not yet ready to take the field as complete formations. Others were New Army battalions that were surplus to the needs of the New Army divisions. These latter battalions, classed as 'Army Troops', were assigned to New Army infantry brigades for purposes of training. If they escaped conversion to pioneer battalions, these battalions were often sent to the front as non-divisional units. There they were assigned to brigades that had particularly broad fronts to defend, had taken heavy casualties in battle, or were otherwise in need of additional infantry.

Infantry brigades were, as a rule, deployed as part of infantry divisions. The exception that proves this rule was the 19th Infantry Brigade. On 12 August 1914, this brigade was formed from four regular battalions that had crossed the Channel as non-divisional units. As the Expeditionary Force moved forward to meet the Germans, the 19th Infantry Brigade followed in trace, holding key towns and bridges along the route that connected the fighting echelon of the Expeditionary Force with its bases on the Channel Coast. By doing this, the brigade protected the columns of supplies and reinforcements moving along that route from German cavalry raids. The fortunes of war were such, however, that the straightforward advance into Belgium became the somewhat more complicated retreat from Mons. With distinctions between front and rear become more and more academic, the 19th Infantry Brigade found itself doing much the same work as the infantry brigades belonging to divisions. Rather than being a special unit with a specific mission, it became the 'small change' of the Expeditionary Force – a means of reinforcing a division that was temporarily missing a brigade or had been given more than a division's worth of territory to defend. The 19th Infantry Brigade continued in that role until late in 1915, when it found a home in the 33rd Infantry Division.

The headquarters of an infantry brigade was a modest organization, concerned primarily with the care and feeding of the brigade commander and his two staff officers. To this end, there was a cook, seven officers' servants ('bâtmen'), a clerk, a small security detachment, a mobile kitchen and a baggage wagon. In addition to this, the brigade headquarters provided a veterinarian to care for the horses of the infantry battalions. (Unlike cavalry regiments and artillery brigades, infantry battalions did not have veterinarians of their own.) It also provided a small post office and two wagons full of entrenching tools. The remarkable thing about the infantry brigade headquarters of 1914 was the lack of any signalling element. This was because a section of each divisional signal company was set aside to meet the communications needs of each infantry brigade.

Cavalry brigades and mounted brigades

There were two types of cavalry brigade in the British Army of 1914. Those assigned to cavalry divisions consisted of three cavalry regiments. Those intended to operate independently consisted of three cavalry regiments and a horse artillery battery. Both types of brigades would be provided with a headquarters and a signal troop. Upon mobilization, most Regular Army cavalry brigades were organized as divisional cavalry brigades while the mounted brigades of the Territorial Force were set up as independent formations. Soon after mobilization, however, this arrangement was reversed. Eight of the previously independent mounted brigades were formed into mounted divisions. When this happened, they lost direct control over their affiliated batteries. At the same time, the formation of a second cavalry division on the Western Front coincided with a decision to provide a horse artillery battery to each cavalry brigade, whether or not it was assigned to cavalry division.

When provided with horse artillery batteries of their own, cavalry brigades became small combined-arms formations – divisions in miniature with considerable flexibility and independence but very little in the way of combat power. As each of the three cavalry regiments of a brigade could put about 400

Cavalry brigade headquarters, war establishment, 1914

	Officers	Sergeants and clerks	Rank and file
Brigadier general	1		
Brigade major	1		
Staff captain	1		
Aide-de-camp to commander	1		
Field cashier	1	1	
Supply duties	2	4	6
Army postal service			3
Military mounted police		1	9
Clerk		1	
Cook			1
Bâtmen			10
Drivers			6
Drivers (mechanical transport)			5
Total	7	7	40

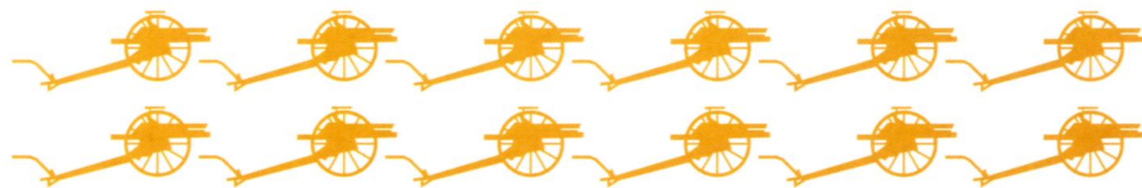
men into the ranks, the 'sabre' strength of the brigade was roughly 1,200. When dismounted, the 'rifle' strength of the brigade was diminished by the need to detail men to care for the horses. As the usual ratio of horse-holders to men was one in four, the rifle strength of a cavalry brigade was roughly the same as the rifle strength of a single infantry battalion. This was why the two machine guns assigned to each cavalry regiment and the light field guns of the horse artillery battery were so important to a cavalry brigade. Even so, a cavalry brigade had roughly the same firepower as a team composed of an infantry battalion and the six 18-pdr field guns of a field artillery battery.

The headquarters of a cavalry brigade was substantially larger than that of an infantry brigade. The chief reason for this difference was the presence of 12 members of the Army Service Corps – two officers, two clerks, two sergeants and six men who were charged with providing the goods and services needed to properly maintain the 1,500 horses belonging to the brigade. Half of these supply specialists were charged with the task of getting oats, hay and straw from the British Army supply system. The other half were experts in the field of requisition – in obtaining forage, shelter and replacement animals from local farmers, merchants and stable owners. In cases where a cavalry brigade was independent of a cavalry division, the size of its headquarters became larger still, with a field cashier (an officer of the army pay department), a paymaster's clerk and four additional motorcar drivers.

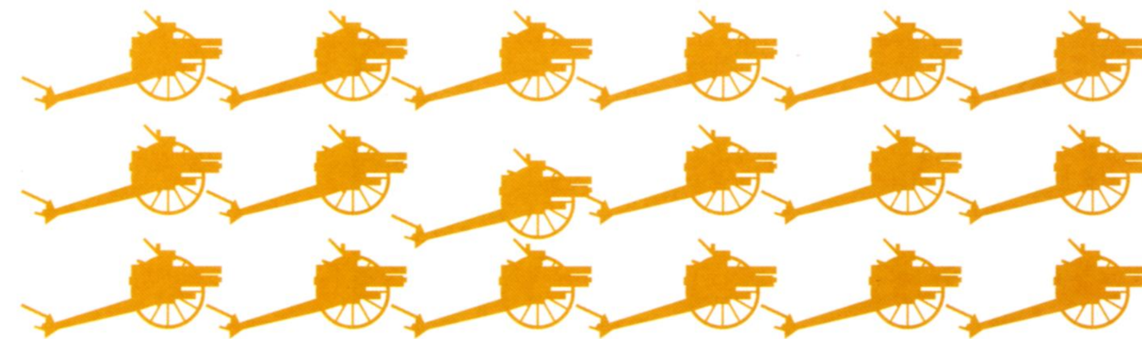
Artillery brigades

All artillery brigades consisted of a brigade headquarters, two or more batteries and one or more ammunition columns. That, however, was where the similarity ended. The exact relationship between component elements – the degree of control exercised by the brigade headquarters, the relative autonomy of the batteries, and the links between batteries and ammunition columns – varied greatly from one type of artillery brigade to another. The commander of a horse artillery brigade, for example, was rarely in a position to exercise much direct control over its component batteries. This was because an individual horse artillery battery was often attached directly to a cavalry brigade. The commander of a field artillery brigade, on the other hand, was usually able to keep its batteries on a much tighter rein. Heavy and siege brigades occupied the middle of this

Types of artillery brigade, Regular Army, 1914



Horse artillery brigade (two batteries each of six 13-pdr guns)



Field artillery brigade (H) (three batteries each of six 4.5in. howitzers)

Siege artillery brigade (four batteries each of four 6in. howitzers)

spectrum. While there was no other authority standing between the brigade headquarters and their respective batteries, those batteries were often armed with weapons of different types, moved frequently from one brigade to another and provided with their own ammunition columns. These factors combined to place a number of obstacles in the way of any commander of a siege or heavy brigade who attempted to place his personal stamp upon his batteries.

The headquarters of an artillery brigade had more features in common with the headquarters of a cavalry regiment than with that of an infantry or cavalry brigade. It was, for example, responsible for providing both medical and veterinary services to its component batteries and ammunition columns. The artillery counterparts to the battalion and regimental tradesmen were, however, assigned to batteries rather brigade headquarters. The one exception to this rule was the 'armament artificer' – a sergeant who specialized in the repair of artillery pieces. Another key difference was the lack of a second-in-command for the brigade. Where the senior major in both infantry battalions and cavalry regiments served as the understudy for the commanding officer, the senior

major in an artillery brigade was a battery commander. The duties that would have been performed by such a second-in-command were divided between the adjutant and the orderly officer. (While both officers might rank either as captains or lieutenants, the adjutant was usually the senior of the two.)

Field artillery brigades, Regular Army and New Army, 1914–15

Brigades (Roman numbers)	Brigades (Arabic numbers)	Contingent	Divisions
I through XLV	1st through 45th	Regular Army	Regular and Indian Army
XLVI through LXIX	46th through 59th	First New Army	9th through 14th
LXX through XCIII	70th through 93rd	Second New Army	15th through 20th
XCIV through CXVII	94th through 117th	Third New Army	21st through 26th
CXVIII	118th	Fourth New Army (Original)	1st Canadian and 11th
CXIX through CXXVI	119th through 126th	Fourth New Army (Original)	37th and 38th (Welsh)
CXXVII through CXXXIII	127th through 133rd	Fourth New Army (Original)	(howitzer brigades)*
CXXXIV through CXLI	134th through 141st	Fourth New Army (Original)	(brigades never formed)
CXLII through CXLV	142nd through 145th	None**	(brigades never formed)
CXLVI and CXLVII	146th and 147th	Regular Army	28th and 29th
CXLVIII through CLXXI (except CLIII and CLIV)	148th through 171st (except 153rd and 154th)	Fourth New Army (Second)	30th through 35th
CLIII and CLIV	153rd and 154th	Fourth New Army (Second)	36th (Ulster) Division
CLXXII and CLXXIII	172nd and 173rd	Fifth New Army	36th (Ulster) Division

** These numbers were used for howitzer brigades for the improvised Regular Army divisions that had been formed without them.*
*** These numbers were originally set aside for the use of the 36th (Ulster) Division.*

Headquarters, field artillery brigade, war establishment, 1914

	Officers	Warrant officers	Sergeants	Rank and file
Lieutenant colonel	1			
Adjutant	1			
Orderly officer	1			
Medical officer*	1			
Veterinary officer*	1			
Brigade sergeant major		1		
Armament artificer*			1	
Trumpeter				1
Corporals				2
Bombardiers				3
Gunners				4
Drivers*				11
Clerk				1
Medical orderlies				2
Bâtmen				8
Total	5	1	1	32

** The medical officer, veterinary officer, armament artificer and two of the 11 drivers were attached from corps other than the Royal Artillery.*

Ammunition columns

An ammunition column might well be described as a 'battery without guns'. It had, after all, all of the elements of a full-scale battery – artillery officers, wagons, horses, tradesmen and drivers – except for artillery pieces and their crews. The senior non-commissioned officers of the unit were even called the 'battery sergeant major' and the 'battery quartermaster sergeant'. Of course, the relative proportions of these elements were somewhat different from that which obtained in batteries – there were fewer officers and gunners, a greater number of tradesmen and drivers. The resemblance between the two types of organization – the batteries that fired the rounds and the ammunition columns that fed them to the batteries – is nonetheless striking.

The only ammunition columns of the Regular Army that existed before the outbreak of war were those that had been formed for the artillery brigades serving with the Indian Army. The rest were formed upon mobilization. The bulk of the men were reservists – either army reservists who had served in the era of the 15-pdr BL field gun or special reservists who had been trained as drivers. The bulk of the horses were requisitioned. (Where a cavalry mount required considerable training and a horse that pulled an artillery piece some breaking-in, a 'civilian' draught horse could become a productive member of an ammunition column in a matter of hours.)

Field artillery brigades usually possessed a single ammunition column. Horse artillery brigades of the Regular Army also possessed a single ammunition column. Those of the Territorial Force, however, had a smaller ammunition column for each battery. (This was an artefact of the pre-war assumption that mounted brigades would be employed as independent formations rather than as part of a mounted division.) Heavy and siege batteries also possessed their own ammunition columns. (This was a function of two things – the greater independence enjoyed by siege and heavy batteries and the fact that ammunition for large artillery pieces weighed more than ammunition for smaller ones.)

The ammunition columns of field artillery brigades armed with field guns were distinguished from all other ammunition columns by the presence of a small-arms ammunition section. This consisted of 14 four-horse wagons loaded with enough rifle ammunition to refill the cartridge pouches, bandoliers and machine-gun belts of an infantry brigade. The presence of a small-arms ammunition section made the ammunition column of a field gun brigade considerably larger than that of the otherwise identical ammunition column of a field howitzer brigade. In particular, the ammunition column of the field gun brigade had one extra subaltern, one extra sergeant and 40 extra men, as well as 56 additional draught horses.

Divisions

When the British Army was mobilized on 4 August 1914, there were only three types of division – the Regular Army infantry division, the Territorial Force infantry division and the Regular Army cavalry division. By the end of 1914, the number of different types of infantry division had increased to five and the number of different types of cavalry division had increased to three. Of these eight patterns, all but one – that of the Territorial Force mounted division – was used by formations serving on the Western Front.

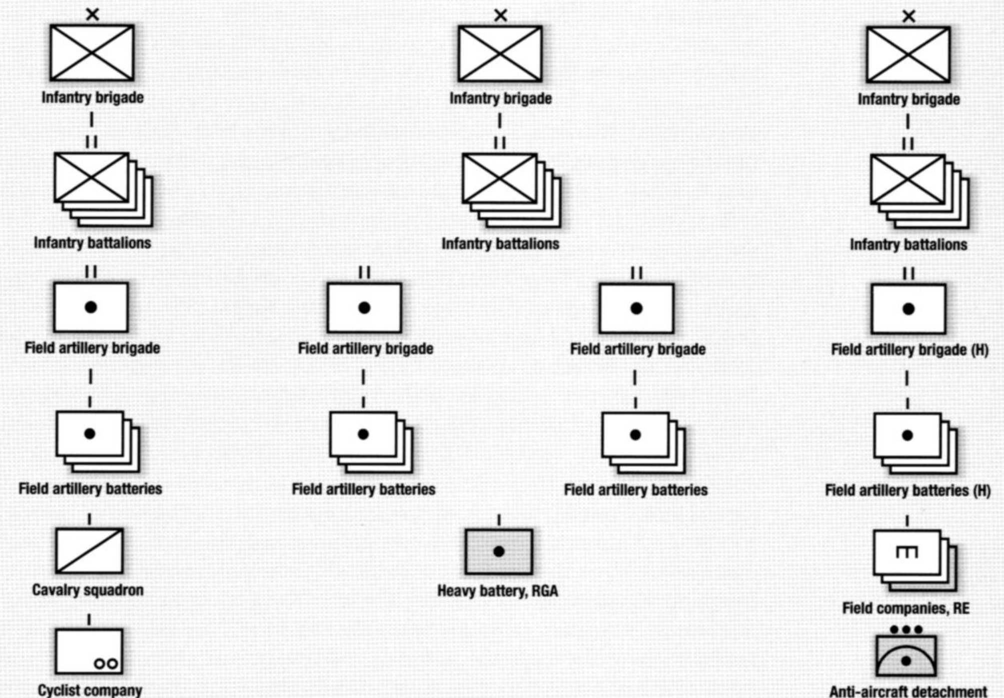
Within each broad category, the chief source of variation between the different types of division was the organization and equipment of the artillery element. That is to say, the most obvious structural difference between the various kinds of Regular Army infantry divisions, the Territorial Force infantry divisions and the New Army infantry divisions was the number of artillery pieces provided, the different kinds of artillery pieces provided, and the way that those artillery pieces were organized into batteries and brigades. Similarly, the major structural difference between the one cavalry division mobilized in August 1914, the cavalry divisions formed (or reformed) after mobilization, and the Territorial Force mounted divisions of the same period was the armament and organization of horse artillery batteries. In two cases, the presence of a special engineering unit also served to differentiate divisions of one type from other divisions in the same category. Regular Army cavalry divisions (of both types) were each provided with a field squadron of Royal Engineers. Territorial Force mounted divisions were not. New Army infantry divisions were each provided with a pioneer battalion well before going overseas. Infantry divisions of other types did not get their pioneer battalions until late in 1915 or early in 1916.

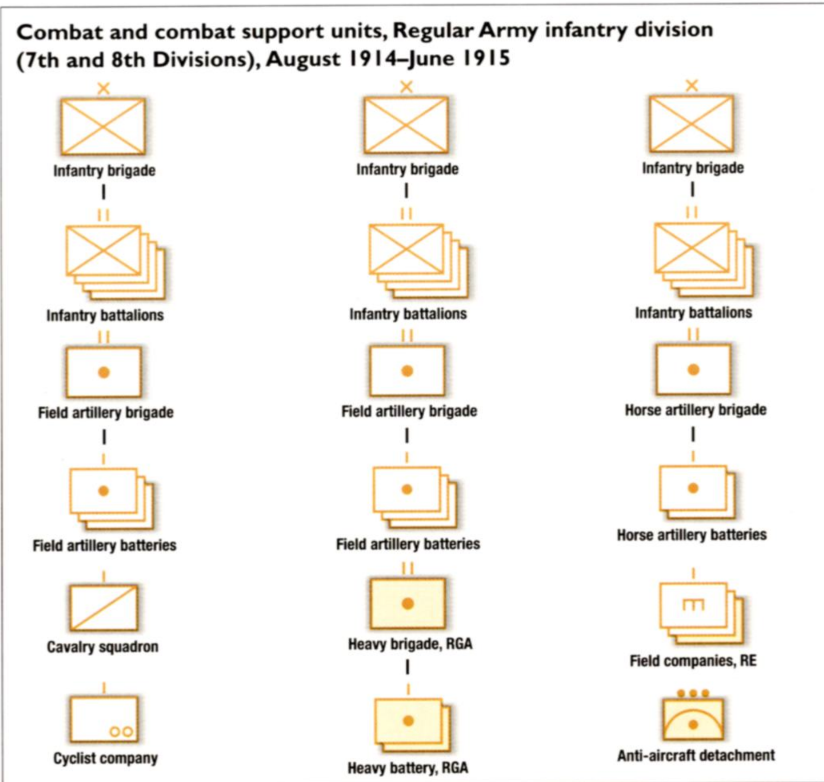
Changes made to the structure of divisions were usually applied to all divisions in that category. Thus, when heavy batteries were withdrawn from Regular Army divisions, they were withdrawn from Territorial Force and New Army divisions as well. When Regular Army divisions were each provided with a third engineer field company, the same was done for infantry divisions of other types. Similarly, as soon as the necessary resources were available, steps were usually taken to reduce the differences between the different types of divisions. Thus, Regular Army and Territorial Force infantry divisions got their pioneer battalions as soon as the necessary infantry battalions became available for conversion. In other cases, rationalization took place in the absence of additional resources. Thus, in June 1915, the 18 six-piece 4.5in. howitzer batteries of the six Regular Army infantry divisions of the original Expeditionary Force were broken up in order to create 12 eight-piece howitzer brigades. These 12 brigades, each of two four-piece batteries, were then assigned, at a rate of one brigade per division, to the ten Regular Army and two Indian Army divisions then serving on the Western Front.

Regular Army infantry divisions

The six divisions of the original Expeditionary Force (the 1st Division through the 6th Division) were the only British Army divisions of 1914 or

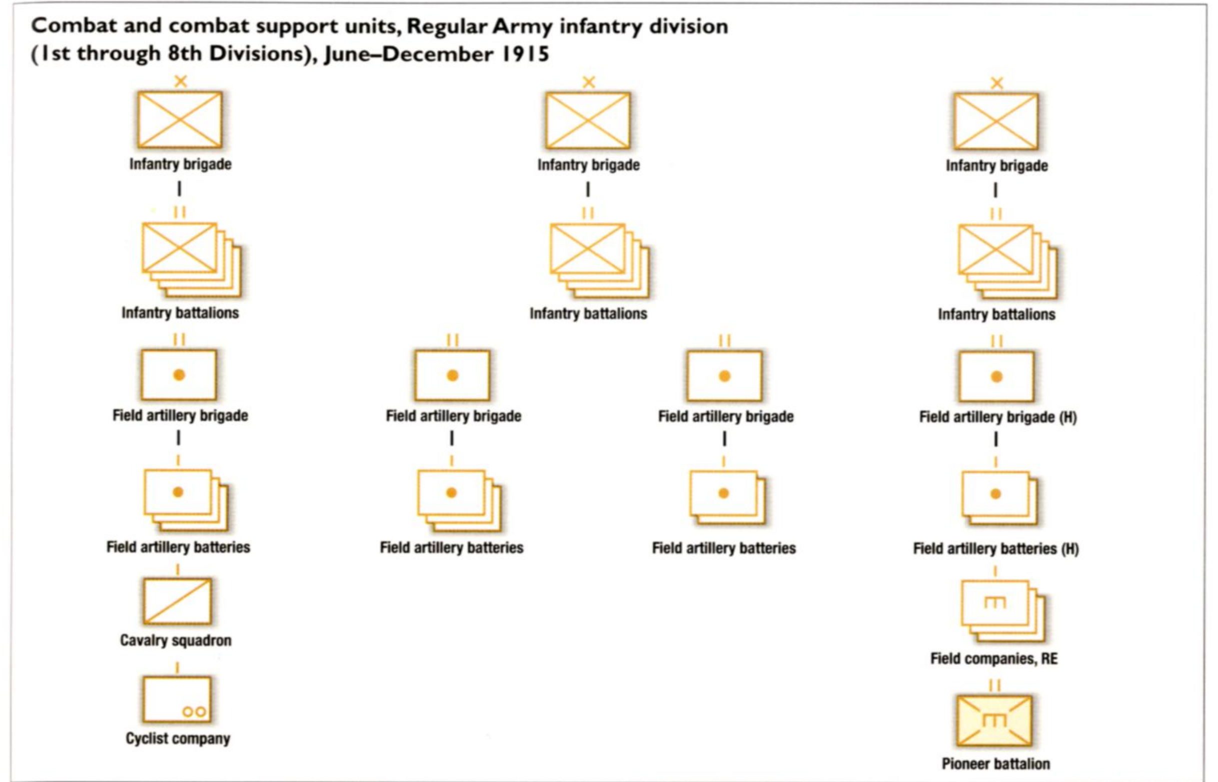
Combat and combat support units, Regular Army infantry division (original Expeditionary Force), August 1914–May 1915




Combat and combat support units, Regular Army infantry division (7th and 8th Divisions), August 1914–June 1915

1915 that had been built without the cutting of corners. In particular, they were distinguished from all infantry divisions formed in the course of the first year of the war by their first-class complement of field artillery – nine six-gun batteries of 18-pdr field guns, three six-piece batteries of 4.5in. howitzers and one four-gun battery of 60-pdr heavy guns. In April 1915, the heavy batteries were taken from their parent divisions and used to form a Heavy Artillery Reserve. In June 1915, six 18-pdrs (one battery) and ten 4.5in. howitzers (one battery and two sections) were taken from each of the divisions of the original Expeditionary Force and used to strengthen the divisional artilleries of the four improvised Regular Army infantry divisions and the two Indian Army infantry divisions then serving on the Western Front. Among other things, this transfer standardized the divisional artillery of the first eight Regular Army infantry divisions (the 1st Division through the 8th Divisions). Each of these divisions thus found itself with eight six-gun batteries of 18-pdr field guns (organized into two brigades of three batteries each and one of two batteries) and two four-piece batteries of 4.5in. howitzers.

In September of 1914, an anti-aircraft detachment was attached to the six infantry divisions of the original Expeditionary Force. The next two divisions to go to France – the 7th and the 8th Divisions – also received such detachments. The 37mm Maxim pom-pom guns with which these units were armed, however, did not prove particularly useful. By the end of January 1915, all of these detachments had been withdrawn. In December 1914, a third engineer field company was assigned to each infantry division of the British Army. As there were not enough Regular Army field companies to meet the needs of the Regular Army divisions that had been formed during the first five months of the war, divisional field companies of Territorial Force divisions were used. (This was the first case where Territorial Force units were permanently assigned to Regular Army formations.)

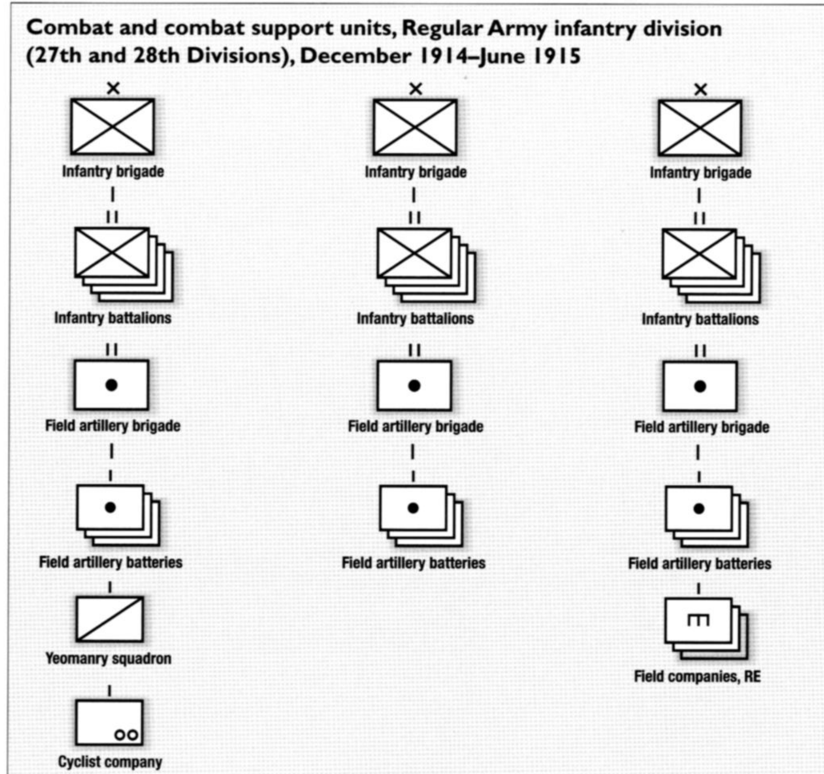

Combat and combat support units, Regular Army infantry division (1st through 8th Divisions), June–December 1915

Improvised infantry divisions

Between September 1914 and January 1915, five infantry divisions were cobbled together from spare units that had either begun the war at home or had returned from overseas. The vast majority of these were Regular Army units. A handful, to include all of the divisional cavalry squadrons and eight out of the 12 engineer field companies, were Territorial Force units. Four of these – the 7th, 8th, 27th and 28th Divisions – were sent to the Western Front as soon as they were formed. The fifth – the 29th Division – took part in the Gallipoli campaign.

The divisional artillery of the 7th and 8th Divisions comprised of six six-gun batteries of 18-pdr field guns, two six-gun horse artillery batteries of 13-pdr guns and two four-gun batteries of 4.7in. heavy guns. The divisional artillery of the 27th and 28th Divisions consisted entirely of nine four-gun batteries of 18-pdr field guns. The four improvised divisions sent to the Western Front were thus not only short of 18-pdr field guns but entirely bereft of both 4.5in. howitzers and 60-pdr heavy guns.

In June 1915, the 'artillery tax' levied upon the six infantry divisions of the original Expeditionary Force provided the means to build up the divisional artilleries of the improvised divisions. In the case of the 7th and 8th Divisions, this 'sharing of the wealth' resulted in divisional artilleries that were identical to the new divisional artilleries of the 1st through 6th Divisions – eight six-gun batteries of 18-pdrs and two four-piece batteries of 4.5in. howitzers. In the case of the 27th and 28th Divisions, the delivery of two six-gun batteries of 18-pdr field guns to each division allowed them to recast their field gun brigades on the pattern of the New Army divisions. At the same time, a second 'share the wealth' scheme deprived six New Army divisions of one of their four 4.5in. howitzer batteries. These were used to create a three-battery howitzer brigade for each of the two junior improvised divisions on the Western Front. This made the divisional artilleries of the 27th and 28th Divisions identical to those of some New Army divisions – but only those divisions that had just lost their fourth howitzer batteries to the second 'artillery tax'.

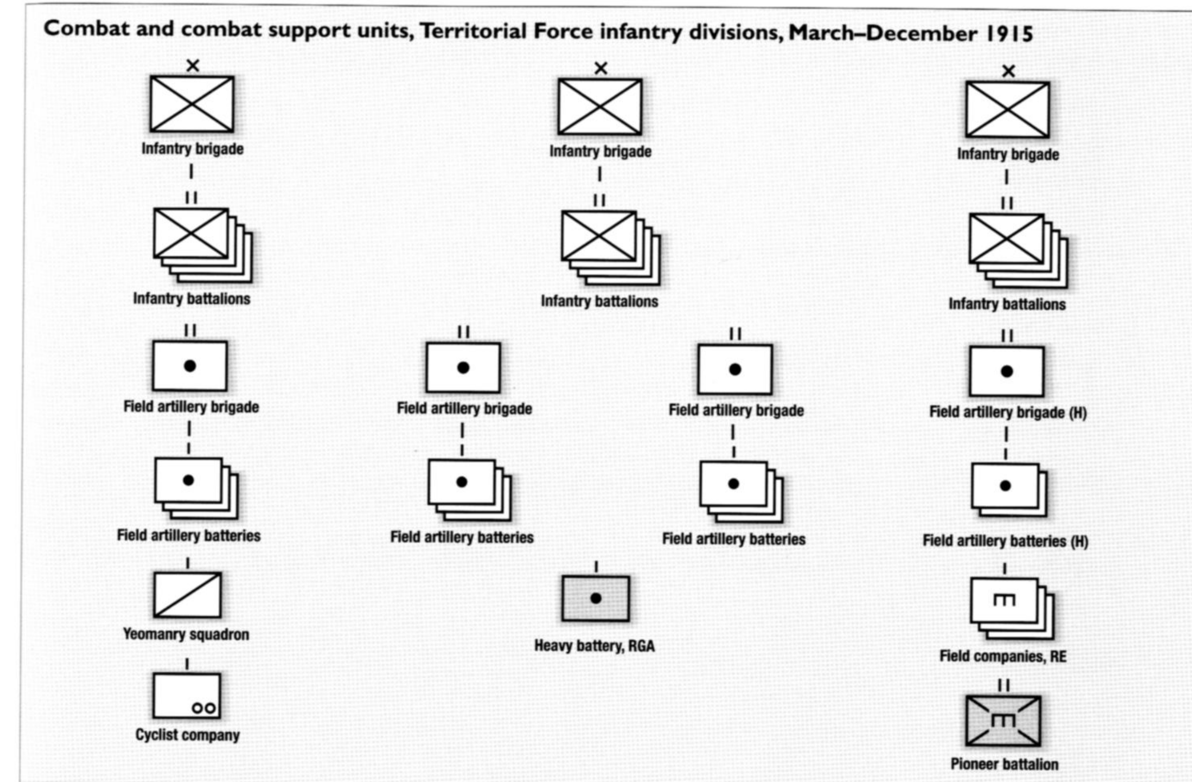


Combat and combat support units, Regular Army infantry division (27th and 28th Divisions), December 1914–June 1915

Territorial Force infantry divisions

The infantry divisions of the Territorial Force were designed by the same people who built the six infantry divisions of the original Expeditionary Force. It is thus not surprising that the two types of infantry division had a great deal in common. Unfortunately, the Expeditionary Force got nearly all of the first-class artillery pieces on hand in the United Kingdom. As a result, the Territorial Force had to make do with the 'hand-me-down' weapons of the Regular Army – 15-pdr BLC field guns, 5in. howitzers and 4.7in. heavy guns. Even then, there was not enough ordnance to go around. The field batteries of Territorial Force divisions were thus limited to four guns or howitzers apiece. Some compensation for weak divisional artilleries came in the form of a particularly strong divisional cavalry. Rather than getting the single divisional cavalry squadron of a Regular Army division, a mobilized Territorial Force division was supposed to get a full regiment of Yeomanry.

Thanks to the formation of Mounted Divisions and the need to provide divisional cavalry squadrons for improvised and New Army divisions, Territorial Force infantry divisions never got their Yeomanry regiments. Instead, they received the same allocation of mounted troops as other divisions – a single squadron of horsemen and a company of bicyclists. Those divisions that found themselves on the Western Front underwent the same alterations as other divisions. Each gained a third engineer field company and pioneer battalion while losing its heavy battery. (Many heavy batteries remained with their parent divisions until after they had crossed the Channel. Soon after landing, however, they were detached from their divisions and attached to either the Heavy Artillery Reserve or a heavy brigade.) Starting in the summer of 1915, the Territorial Force divisions began to swap their obsolescent artillery pieces for 18-pdrs and 4.5in. howitzers. As this was a 'one-for-one' exchange, the organization of the field artillery units involved remained the same.



Combat and combat support units, Territorial Force infantry divisions, March–December 1915

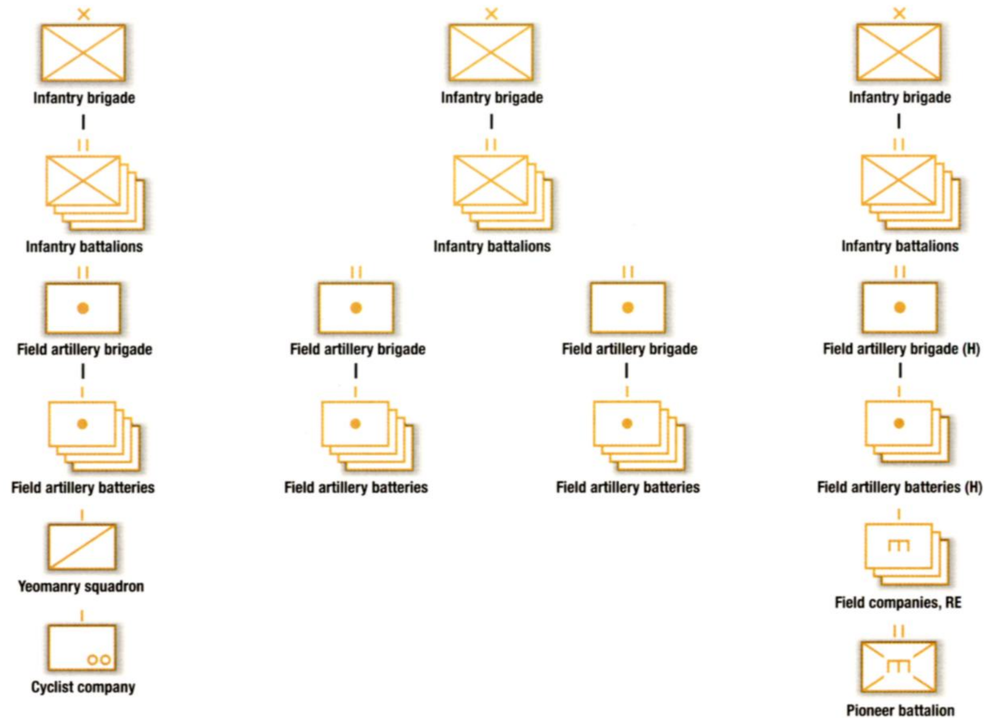
New Army infantry divisions

The earliest plans for the creation of New Army infantry divisions called for them to be close copies of the infantry divisions of the original Expeditionary Force. Indeed, the only difference between the two types of formation lay in the divisional mounted troops. (The infantry divisions of the original Expeditionary Force had a squadron of cavalry and a 100-man cyclist company. New Army infantry divisions were to have a 200-man cyclist company but no cavalry at all.) Well before the New Army divisions were ready to go overseas, these plans underwent a series of changes. The first of these modifications, begun in the autumn of 1914, was the creation of pioneer battalions. The second, which took place in January 1915, was the imposition of the 'four-by-four-by-four' structure upon the divisional artillery.

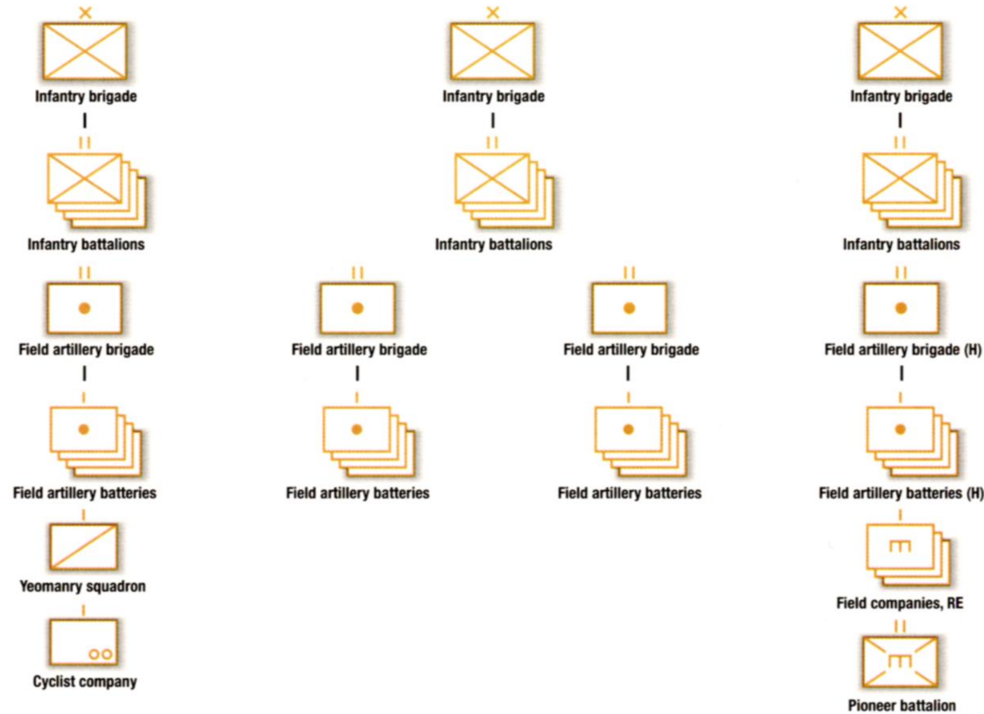
These two modifications were eventually adopted for use by nearly all other British Empire divisions on the Western Front. The chief reason for this was their compatibility with the type of officers that were most available at the time – enthusiastic young men with very little in the way of professional training or military experience. The institution of the pioneer battalion more than doubled the engineer strength of a division. Thus, at a time when French divisions had fewer than three field engineer or infantry pioneer companies per division and German divisions had, on average, fewer than two comparable units, many British divisions had seven companies of skilled workmen in uniform. The 'four-by-four-by-four' artillery structure gave infantry divisions an artillery element that was composed of 16 small batteries rather than 12 large ones. This, among other things, made it possible to give the command of batteries to relatively junior officers – recently promoted captains rather than experienced majors.

The doubling of existing Yeomanry regiments in September 1914 made it possible to provide a squadron of Yeomanry to each of the New Army divisions without weakening the mounted brigades assigned to the defence of

Combat and combat support units, Regular Army infantry divisions (27th and 28th Divisions) and New Army infantry divisions (9th 12th, 14th 15th, 19th and 20th Divisions), June–December 1915



Combat and combat support units, New Army infantry divisions (except 9th 12th, 14th 15th, 19th and 20th Divisions), June–December 1915

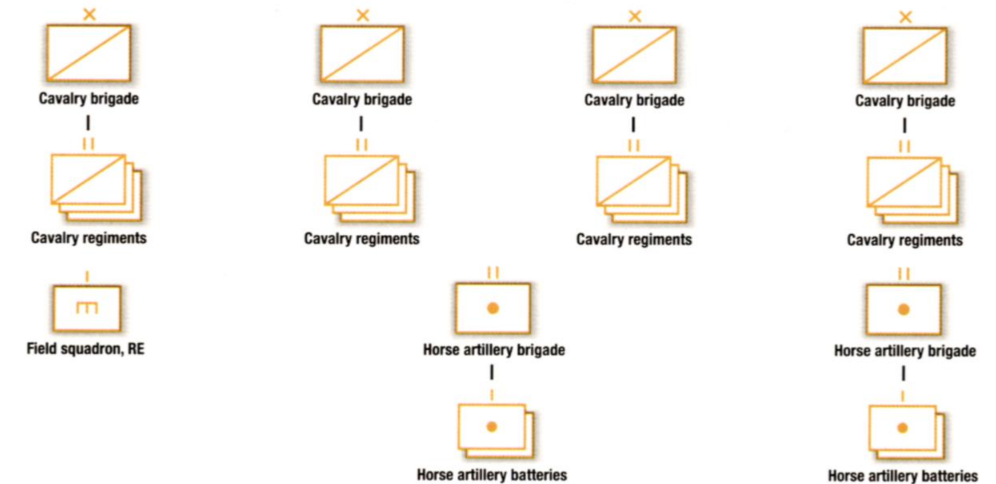


the British Isles. Though the cyclist companies of New Army divisions had originally been doubled in order to compensate for the lack of divisional cavalry, they were not reduced when the Yeomanry squadrons were provided.

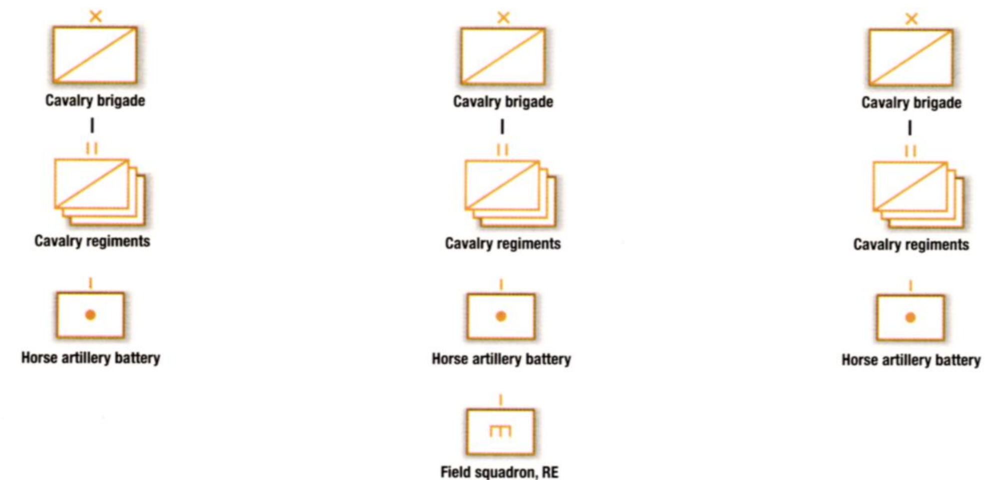
Cavalry and mounted divisions

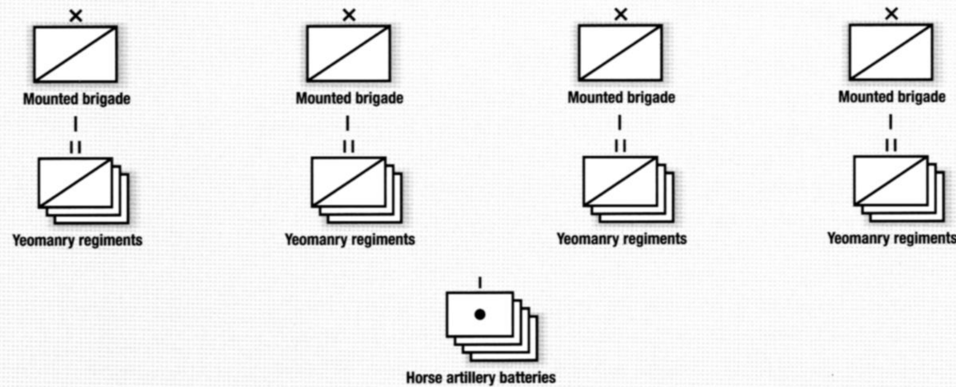
Just as the term 'cavalry regiment' was restricted to the horse cavalry units of the Regular Army, the terms 'cavalry division' and 'cavalry brigade' were restricted to horse cavalry formations of the Regular Army. Because of this, horse cavalry formations made up of Territorial Force (Yeomanry) units were known as 'mounted divisions' and 'mounted brigades'. Cavalry formations were further distinguished from mounted formations by their structure. Cavalry divisions possessed an organic engineer unit – a field squadron of the Royal Engineers. Mounted divisions did not. Cavalry divisions might consist of two, three or four cavalry brigades, each of which usually possessed its own horse artillery battery. Mounted divisions invariably consisted of four cavalry brigades and four horse artillery batteries. With one notable exception – the 1st Cavalry Division during the first six weeks of the

Combat and combat support units, 1st Cavalry Division, August 1914



Combat and combat support units, cavalry division, October 1914–December 1915





war – cavalry divisions possessed but one horse artillery brigade headquarters and one horse artillery ammunition column. Mounted divisions possessed two horse artillery brigade headquarters and four smaller ammunition columns.

Though cavalry brigades were not used as independent formations on the Western Front, their configuration as such made it easy to add or subtract brigades from cavalry divisions. In the autumn of 1914, this feature was used to provide an organizational framework for the many cavalry regiments arriving in France from India, Egypt and South Africa. In August 1914, the first four cavalry brigades available to the Expeditionary Force were assembled to form the 1st Cavalry Division. This division was organized in accordance with pre-war plans, with the four horse artillery batteries remaining under the control of the headquarters of the two horse artillery brigades. In September 1914, the 5th Cavalry Brigade was formed as an independent formation. Soon after arriving in France, however, it was combined with the 3rd Cavalry Brigade to form the 2nd Cavalry Division. This new division was not only half the size of the original 1st Cavalry Division, it was organized on different principles. In particular, the component cavalry brigades were organized as if they were independent brigades. That is to say, they were each given a horse artillery battery of their own. In October and November 1914, four more cavalry brigades (the 6th, 7th, 8th and 9th) were formed and sent over to France. This made possible the reorganization of the cavalry of the Expeditionary Force into three identical cavalry divisions. The brigades of these divisions were organized as if they were independent cavalry brigades. This, among other things, solved the problem of the incompatibility of 'square' horse artillery brigades with 'triangular' cavalry divisions.

The onset of trench warfare put an end to any plans to send either mounted divisions or mounted brigades to the Western Front. Instead, the two mounted divisions (1st and 2nd Mounted Divisions) formed at the start of the war and the six independent mounted brigades not formed into divisions spent the first winter of World War I on home defence duties. In March 1915, the 2nd Mounted Division received warning of an impending transfer to the Near East. To take its place in the home defence forces, the War Office used second-line Yeomanry regiments and second-line Territorial Force horse artillery batteries to form a third mounted division, initially called the 2/2nd Mounted Division. (Early in 1916, this formation was given the less awkward name of 3rd Mounted Division.) Soon after arriving in Egypt, the regiments of the original 2nd Mounted Division were deprived of their horses and, in August 1915, sent to Gallipoli to fight as infantry.

Logistics units

The logistics system of the Expeditionary Force was a modular organization, with a large number of autonomous building blocks that could be combined in a wide variety of ways. Most of these building blocks were primarily concerned with the custody, transport and proper delivery of supplies. Variously known as 'reserve parks', 'ammunition parks', 'sections of a divisional ammunition column' and 'supply and transport companies', these were, in terms of size and status, the rough equivalents of infantry companies, artillery batteries or cavalry squadrons. Commanded by a major or captain, each consisted of anywhere from 80 to 400 men. In addition to these transport units, there was a variety of specialized units, which ranged from butcheries, bakeries and repair shops to several different kinds of hospitals for men and horses. The War Establishments for the Expeditionary Force even made provision for a military prison, so that miscreants might be punished in proximity to the battlefield.

All transport units of the Expeditionary Force contained four basic elements – a headquarters, an element concerned with the handling and accounting for supplies, an element composed of vehicles and drivers, and a small repair shop for keeping the means of locomotion in serviceable condition. The peculiar form taken by these elements, and thus the size and shape of the overall unit, was determined by two factors. The first of these was the type of supplies being carried. The second was the type of vehicles used. Thus, a unit that used horse-drawn vehicles to carry ammunition for 4.5in. howitzers was quite different from one which used 'mechanical' vehicles to carry general supplies. (As a general rule, transport units that were assigned directly to divisions tended to be equipped with horse-drawn vehicles. Those which belonged to the Expeditionary Force as a whole tended to use lorries.)

The logistics system of the Expeditionary Force was based on the principle of the self-contained division. That meant that most logistics units either belonged to a particular division or to the Expeditionary Force as a whole. Many of the units in the latter category, moreover, were allocated on a divisional basis. That is to say, while divisional supply columns and divisional ammunition parks did not belong to particular divisions, they were provided to the Expeditionary Force on the basis of one such unit for each infantry division assigned.

The regimental affiliation of logistics units varied greatly. Units involved in the handling of general supplies, to include food for men and fodder for horses, were invariably provided by the Army Service Corps. Thus, both butcheries and bakeries, as well as divisional supply columns and the supply and transport companies assigned to each division, were units of that regiment. Divisional ammunition parks also belonged to the Army Service Corps. Divisional ammunition columns, however, were units of the Royal Regiment of Artillery. Some of the units that provided highly specialized services, such as the workshops of the Army Ordnance Corps and the hospitals of the Royal Army Medical Corps, belonged to the regiments formed to provide those services. Others, such as printing shops and railway construction companies, were units of the Royal Engineers.

Command, control, communications and intelligence

Within the Expeditionary Force, the functions that are nowadays grouped together as 'command, control, communications and intelligence', were exercised by four types of organizations – the headquarters of the Expeditionary Force as a whole, the headquarters of its component formations, the specialized signals units of the Royal Engineers and the aeroplane squadrons of the Royal Flying Corps. Of these, command was the exclusive (and inalienable) duty of the officers commanding various formations, control was largely exercised by staff officers, communications was the work of the signals units and intelligence was the chief activity of the aeroplane squadrons. Needless to say, there was often considerable overlap between these functions. Staff officers were often involved in both communications and intelligence. In the former role, they served as intelligent messengers, capable of fully explaining the context of the messages they carried from one headquarters to another. In the latter role, they were soon to become involved in what is now called the processing of intelligence, sifting through information to find the pieces of an increasingly complex jigsaw puzzle.

General headquarters

Often known as 'GHQ', the General Headquarters of the Expeditionary Force began the war with two distinct functions. The operational function of GHQ was the command of a field army taking part in a highly mobile campaign. In this first role, it performed the same duties as the headquarters of a French or German field army. The strategic function of GHQ was the employment of all available means to further the strategic interests of the British Empire. In this second role, GHQ did the same sort of work as the theatre headquarters of the French and German armies – the *Grand Quartier Général* (GQG) and the *Oberste Heeresleitung* (OHL). In the course of the first year of war, as mobile warfare gave way to positional warfare and the Expeditionary Force grew from the equivalent of a small field army to an organization comparable to a large army group, the first function was completely eclipsed by the second.

GHQ was divided into three echelons. The First Echelon was primarily concerned with operational matters and general supervision. To this end, it initially consisted of the commander-in-chief, 35 staff officers, 25 clerks and 91 men in the ranks of corporal, lance-corporal and private to serve as cooks, drivers and bâtmen. The Second Echelon, with 4 officers and 36 men, took care of the personnel, vehicles and horses of the First Echelon. The Third Echelon, which was located at the Base of the Expeditionary Force, was the office of the Adjutant-General. Its two most important functions were military discipline and keeping the component units of the Expeditionary Force up to strength.

Formation headquarters

The headquarters of an infantry division consisted mostly of the divisional staff – the officers who assisted the general officer commanding in the exercise of command and the directors of various services (ordnance, medical, veterinary) within the division – and of soldiers who provided services directly to that staff. The latter included a large number of personal servants (bâtmen) and drivers, a farrier and shoeing smith to care for the horses, and a cook. There were, in

Headquarters of a division

	Officers	Clerks	Sergeants	Rank and file
Commanding general	1			
Staff officers	6	6		
Medical services	2	3		
Veterinary services	1	1		
Ordnance services	1	1		
Field cashier	1	1		
Assistant provost marshal	1		1	9
Aides-de-camp	2			
Army postal service			1	2
Farrier			1	
Shoeing smith				1
Acting quartermaster sergeant			1	
Cook				1
Bâtmen				27
Drivers				10
RAMC (water duties)				2
Total	15	12	4	52

addition, several small detachments that were part of the divisional headquarters simply because they had no other home – a small detachment of mounted military policemen and a small post office. The headquarters of a cavalry division was nearly identical to that of infantry division, with the only difference being the presence of a larger number of drivers. The infantry division headquarters had five horse-drawn wagons or carts, five motorcars and

Headquarters of an 'army'

	Officers	Clerks	Sergeants	Rank and file
Commanding general	1			
Staff officers	9	10		
Brigadier general, RA	1	1		
Colonel, RE	1			
Medical officer/orderlies	1			2
Camp commandant	1			
Assistant provost marshal	1		1	6
Aides-de-camp	2			
Army postal service	1			2
Farrier			1	
Shoeing smith				1
Acting quartermaster sergeant			1	
Cook				1
Bâtmen				35
Drivers				9
Total	18	14	3	56

a total of ten drivers for these vehicles. The cavalry division headquarters had five horse-drawn vehicles and 16 motor vehicles of various sorts. It was thus provided with 21 drivers.

The headquarters of an army corps – a group of two or more divisions within the Expeditionary Force – had much in common with that of a division. The chief differences lay in a slightly higher number of staff officers, the absence of separate engineer and artillery headquarters, and the fact that all vehicles were motorized. While the motorization of transport reduced the number of drivers needed by an army corps headquarters, the presence of so many officers, clerks and officers' servants gave the army corps headquarters the appearance of the business district of a small town – one large enough to have both a mayor (the camp commandant) and a small medical surgery (the medical officer and his two orderlies) of its own. Where the senior artillery officer of a division had a headquarters of his own, the senior artillery officer of an army corps – the Brigadier General Royal Artillery (BGRA) – had to make do with a single clerk. The senior engineer officer of the army corps – the Colonel Royal Engineers (CRE) – was in the same position. Neither of these officers was provided with a headquarters because neither of them was a commander. Rather, both the BGRA and the CRE were advisors to the general officer commanding the army corps.

When, in December 1914, the Expeditionary Force grew to the point that the army corps had to be divided into separate armies, the headquarters formed for those armies were similar to those of army corps and divisions. The ranks of the respective staff officers and senior advisors at an army headquarters tended, however, to be more senior than their counterparts at a corps headquarters. Thus, the senior artillery advisor at an army headquarters was a Major General Royal Artillery (MGRA) while the senior engineer advisor was a Brigadier General Royal Engineers (BGRE).

Specialized headquarters

While the commanders of the infantry brigades of an infantry division reported directly to the general officer commanding that division, the commanders of the field artillery brigades reported to an officer known as the 'commander Royal Artillery' (CRA). Though this officer, who commanded all of the artillery assigned or attached to the division and usually wore the rank of a brigadier general, was the peer of the commanders of the infantry brigades, his headquarters was different from the headquarters of infantry brigades. In particular, where the headquarters of an infantry brigade provided a variety of services to the component battalions – veterinary services, postal services and the care of entrenching tools – the headquarters of the divisional artillery was exclusively concerned with command and communications. That is to say, its personnel were either the personal assistants (of one sort or the other) to the CRA or signallers. Veterinary and postal services were handled by the headquarters of the field artillery brigades while entrenching tools were held by the individual batteries.

If the headquarters of the divisional artillery of an infantry division was the imperfect analogue of the headquarters of an infantry brigade, the headquarters of the divisional engineers might well be described as a somewhat smaller version of an infantry battalion headquarters. The headquarters of the divisional engineers could be so small because the companies that it normally supervised – two or three field companies and a divisional signal company – were administratively self-sufficient in a way that infantry companies were not. As engineer companies did not have doctors or medical orderlies of their own, the one administrative service that the headquarters of the divisional engineers did provide to the engineer companies of a division was medical care.

Where infantry divisions had two specialized headquarters, cavalry divisions had none. For a few weeks after the start of the war, the single cavalry division of the Expeditionary Force possessed a 'headquarters of the divisional artillery of a cavalry division'. This curious organization, which was similar to the 'headquarters of the divisional artillery of an infantry division', served to coordinate the actions of the two horse artillery brigades that were originally assigned to the cavalry division. Once the single large cavalry division was replaced by two smaller cavalry divisions, horse artillery batteries were assigned directly to brigades and the divisional artillery headquarters was dissolved.

Headquarters of divisional artillery

	Officers	Clerks	Rank and file
Brigadier general	1		
Brigade major	1		
Staff captain	1		
Aide-de-camp	1		
Clerk		1	1
Orderlies			3
Signallers			4
Cook			1
Bâtmen			8
Drivers			2
Total	4	1	19

Headquarters of divisional engineers

	Officers	Clerks	Rank and file
Lieutenant colonel	1		
Adjutant	1		
Medical officer	1		
Engineer clerk		1	
Medical orderlies			2
Cook			1
Drivers			3
Bâtmen			5
Total	3	1	11

Signals units

With the notable exceptions of artillery communications and the internal message traffic of infantry battalions and cavalry regiments, all signals work in the British Army of World War I was performed by signals units of the Royal Engineers. Those signals units assigned to divisions – the signal companies of infantry divisions and the signal squadrons of cavalry divisions – were permanent units that employed a wide variety of communications techniques. These included, but were not limited to, the use of wireless and cable telegraphy, voice telephone, motorcycle despatch riders, mounted despatch riders and semaphore. Signal units assigned to formations that were larger than divisions also used a variety of techniques, but were organized on the modular principle. Each consisted of a permanent headquarters, which provided a message centre and despatch riders, and a variable number of autonomous sections. The latter consisted mostly of cable sections, which dealt with buried

Signal company of an 'army'

	Officers	Sergeants	Rank and file
Headquarters			
Major	1		
Captains	2		
Company sergeant major		1	
Company quartermaster sergeant		1	
Sergeants		3	
Farrier sergeant		1	
Corporals			2
2nd corporals			2
Trumpeter			1
Sappers and pioneers			24
Motorcyclists	1	1	10
Drivers			9
Bâtmen			7
RAMC (water duties)			2
Total	4	7	57
An air-line section			
Subaltern	1		
Sergeants		2	
Shoeing smith			1
Corporals			2
2nd corporals			2
Sappers and pioneers			33
Drivers			13
Bâtmen			2
Total	1	2	53
A cable section			
Subaltern	1		
Sergeant		1	
Shoeing smith			1
Corporals and 2nd corporals			3
Sappers and pioneers			18
Drivers			10
Bâtmen			2
Total	1	1	34
A wireless section			
Subaltern	1		
Sergeant		3	
Shoeing smith			1
Corporals			2
2nd corporals			2
Sappers			28
Drivers			14
Bâtmen			2
Total	1	3	49

cable, and air-line sections, which dealt with wire strung on telegraph poles. There was also a wireless section, which was primarily intended to provide a communications link between the General Headquarters and the cavalry divisions. The number of air-line, cable and wireless sections attached to a given signal company headquarters depended upon the needs of the moment. Thus, an army corps operating in an area where there was a greater need for overhead transmission lines than buried ones might have two or three air-line sections but only one cable section.

The signal companies of infantry divisions were divided into four sections. No. 1 section, which was different from the other three, took care of the communications needs of the division as a whole. The other three sections were assigned to infantry brigades. The signal squadrons of cavalry divisions were likewise divided into four troops. However, because each cavalry brigade had a signal troop of its own, these troops were specialized by the means of communications used – whether cable, wireless sets mounted on wagons, wireless sets mounted on pack horses, or despatch riders.

Divisional signal companies and signal squadrons of cavalry divisions bore the number of the division to which they were assigned. Thus, the 1st Divisional Signal Company was assigned to the 1st Division while the 1st Signal Squadron belonged to the 1st Cavalry Division and the 2nd Mounted Divisional Signal Squadron was formed for the needs of the 2nd Mounted Division. The signal troops of cavalry brigades were named for those brigades. Thus, the 5th Signal Troop belonged to the 5th Cavalry Brigade and the London Signal Troop served as part of the London Mounted Brigade. The signal companies of armies and army corps, such as the 3rd Army Headquarters Signal

Signal squadron

	Officers	Sergeants	Rank and file
Major	1		
Captain	1		
Veterinary officer	1		
Sergeant major		1	
Quartermaster sergeant		1	
Farrier sergeant		1	
Trumpeter			1
Sappers			9
Drivers			12
Bâtmen			6
RAMC (water duties)			2
'A' Troop (wireless wagons)			
Subaltern	1		
Sergeant		1	
Shoeing smith			1
Corporal			1
2nd corporals			2
Sappers			16
Drivers			10
Bâtmen			2

(continued on page 72)

'B' Troop (cable wagons)			
Subaltern	1		
Sergeant		1	
Shoeing smith			1
Corporal			1
2nd corporals			2
Sappers			19
Drivers			10
Bâtmen			2
'C' Troop (pack wireless)			
Subaltern	1		
Sergeant		1	
Shoeing smith			1
Corporal			2s
2nd corporals			2
Sappers			27
Drivers			9
Bâtmen			2
'D' Troop (despatch riders and signallers)			
Subalterns	2		
Sergeant		2	
Shoeing smiths			2
Corporal			1
2nd corporals			2
Sappers			35
Drivers			3
Bâtmen			4
Motorcyclists		1	5
Total	8	9	190

Company and the 5th Corps Headquarters Signal Company, were named for the headquarters of their parent formations. (As the war progressed, the word 'headquarters' was increasingly omitted from the titles of these units.)

The 16 air-line, cable and wireless sections mobilized in August 1914 were distinguished by letters of the alphabet. Sections 'A' though 'E' were air-line sections. Sections 'F' through 'P' were cable sections. Section 'Q' was a wireless section. Sections formed after mobilization, such as 'R Cable Section', were provided with letters until the alphabet ran out. After that, sections were either provided with numbers (e.g. No. 29 Air-Line Section and No. 9 Wireless Section) or doubled letters (e.g. AD Cable Section.)

The Royal Flying Corps

Where most military technology was concerned, the seven years that passed between the formation of the Expeditionary Force and the start of World War I was an era of considerable stability. The inventions that had the greatest effect upon land warfare during the first year of World War I – smokeless powder, magazine rifles, quick-firing artillery and machine guns – had all been introduced before 1907. The one great exception to this rule, the only entirely new weapon provided to the Expeditionary Force before the outbreak of war, was the aeroplane. On the day that the Expeditionary Force was formed, neither the British Army nor the Royal Navy possessed any aeroplanes at all. Indeed, no heavier-than-air flying machine of any description would exist within the borders of the United Kingdom until autumn 1907. Nonetheless, the progress of British military aviation was such that, by the time that the Expeditionary Force was mobilized, the recently formed Royal Flying Corps was able to provide it with more than 60 operational aeroplanes and a slightly larger number of well-trained pilots.

The aeroplanes of the Royal Flying Corps were organized into self-contained squadrons. On the eve of World War I, there were seven of these. Upon mobilization, however, No. 7 Squadron was disbanded in order to bring the other six squadrons up to their full war establishment. Though aeroplane squadrons were equipped with a variety of aircraft, their organization was uniform. Each squadron consisted of three flights and a small headquarters. Each flight was composed of four aeroplanes, the 'officer fliers' that piloted them, and 39 'air mechanics'. The headquarters included a commanding officer, two sergeants-major (one was the squadron sergeant-major, the other the senior mechanic in the unit), six supernumerary officers and 12 additional air mechanics. The supernumerary officers were all qualified pilots who could either serve as substitutes for the pilots assigned to flights or as aerial observers. The air mechanics, however, were not all technicians. Rather, the term encompassed all ground personnel, to include those who served as bâtmen.

In August 1914, four aeroplane squadrons – No. 2, No. 3, No. 4 and No. 5 Squadrons – crossed the English Channel to join the other elements of the Expeditionary Force. In the course of the year that followed, seven more squadrons would join them. No. 6 Squadron reported for duty in October 1914. No. 16 and No. 1 arrived, respectively, in February and March 1915. No. 7 and No. 8 were sent over in April, while No. 10 and No. 11 made their transit in July. In the winter of 1915, the number of squadrons then serving in France had grown to the point where some sort of intermediate headquarters was required. Thus was born the institution of the 'wing'. The 1st Wing, initially composed of three squadrons, was assigned to the First Army. The 2nd Wing, also of three squadrons, was given to the Second Army. When, in summer 1915, the Third Army was formed, the 3rd Wing was formed for it. Not all squadrons, however, were assigned to wings. At any given point in the late winter, spring or summer of 1915, at least one squadron remained under the direct control of General Headquarters.

At first, the chief mission of the aeroplane squadrons of the Expeditionary Force was operational reconnaissance – flying over the areas between opposing armies in order to locate substantial concentrations of enemy troops. As mobile warfare gave way to positional warfare, this mission was eclipsed by two more pressing requirements – the need to obtain detailed information about enemy defences and the need to help artillery units bring effective fire upon targets they could not see. By October 1914, these new missions were complicated by the dawn of air-to-air combat and increasing interest in the possibility of aerial bombardment. (The latter development was largely inspired by the destruction of a parked German dirigible by bombs dropped from an aeroplane of the Royal Naval Air Service.)

The multiplication of missions soon led to specialization. It would be a while, however, before the familiar categories of fighter squadron, bomber squadron, reconnaissance squadron and observation squadron would appear. Rather, the first distinction to be made was between squadrons which engaged in long-range reconnaissance and those with a more tactical focus. The squadrons reporting directly to General Headquarters tended to be of the former type. Those belonging to wings (and thus to armies) tended to belong to the second variety.

Weapons and equipment

The six infantry divisions of the original Expeditionary Force were better armed than any other infantry divisions that served on the Western Front in 1914 or 1915. The rifles were better. The machine guns were better. The field artillery was better. Indeed, the great deficiencies of British armament during the first year of World War I lay outside the realm of the infantry division. The first of these was the complete absence of heavy howitzers. The second was the fact that the first-class weapons with which the original Expeditionary Force had been armed were in short supply. Many units that went to war in 1914 and 1915 were therefore forced to make do with substitutes of one sort or another.

The standard rifle of the British Army of 1914 – the famous Short Magazine Lee-Enfield – was every bit as accurate and reliable as the second-best rifle on the Western Front – the German-designed Mauser. In addition to these widely recognized advantages, the Short Magazine Lee-Enfield possessed the great (but largely unsung) virtue of being short. (German accounts of service in World War I are full of complaints about the excessive length of the standard German rifle and of attempts by German soldiers to replace them with carbines.) The superiority of the Short Magazine Lee-Enfield over the Mauser, however, was a slight one in comparison to the superiority of the standard British rifle over the standard French rifle. The Model 1886 Lebel, which was one of the first standard military rifles to be designed to fire smokeless powder cartridges, was cursed with an old-fashioned tube magazine. When this magazine lost its shape – as it often did – the Lebel was transformed into a single-shot rifle – a weapon that was not much better than Chassepôt rifles used in the Franco-Prussian War of 1870–71.

The standard machine gun of the Expeditionary Force – the Vickers machine gun adopted in 1912 – was also better than its French, German and Belgian counterparts. It partook of the legendary reliability of the older Maxim guns, which still equipped many British units. At the same time, the Vickers gun was considerably lighter than both the older Maxim guns and the newer French machine guns. The German Maxim (Model 1908) tipped the scales at 64kg (141lb) and the standard French machine gun (the St Etienne, Model 1907) weighed 51kg (112lb). The Vickers gun weighed only 38kg (83lb). Unlike the St Etienne, moreover, the Vickers had not paid a design penalty for its lower weight. Thanks to its water jacket, the Vickers could maintain a high rate of fire long after the air-cooled St Etienne had overheated.

Though a vast improvement over the 4.7in. gun, the 60-pdr heavy gun was not without its problems. In the autumn of 1914 and the winter of 1915, broken recoil mechanisms kept many 60-pdrs out of the fight. The silver lining to this cloud was the effect that it had on ammunition supplies. Throughout the first year of the war, the 60-pdr was the only thoroughly modern artillery piece in the Expeditionary Force that was free from a chronic shortage of the right sort of shells. (Imperial War Museum, Q48940)

By spring 1915, a large number of the new Vickers machine guns had been supplied to units of the Expeditionary Force. Demand, however, continued to outstrip supply. One of the reasons was the growing threat from German aircraft. Here, a sergeant of the 2nd Battalion, Argyll and Sutherland Highlanders, directs the employment of a Vickers gun mounted on an improvised anti-aircraft platform. (The wooden poles served to keep the machine gun from firing at angles that would result in bullets falling on friendly troops.) (Imperial War Museum, Q43967)

The French Army did have one advantage over the British Army where weapons were concerned. The 75mm field gun adopted in 1887 had an unbeatable rate of fire. Because of its hydro-pneumatic recoil system, the 75mm field gun could spit out 20 to 30 rounds a minute. Neither the British 18-pdr (84mm) field gun nor the German 77mm field gun could match that. The 8.6kg (19lb) shell fired by the 18-pdr, however, was substantially more powerful than the 7.2kg (16lb) shell of the 75mm field gun or the 6.8kg (15lb) shell of the 77mm German field gun. Indeed, when they met to discuss the lessons learned in the first five months of the war, senior German gunners came to the conclusion that they wanted a field gun that fired a shell as heavy as that of the 18-pdr. (Unfortunately for them, this could not be done without increasing the calibre of the standard German field gun. As this would seriously interfere with the production of new weapons, the project was dropped.)

The standard light howitzer of the British Army of 1914 – the 4.5in. (114mm) howitzer adopted in 1910 – also fired a heavier shell than its German counterpart. Where the 105mm shell for the German divisional howitzer weighed 15.7kg (35lb) the 114mm shell for the British divisional howitzer weighed 17.5kg (39lb).

The relative superiority enjoyed by British small arms and field artillery was not shared by the heavier ordnance of the British Army. The best heavy piece in the British inventory in 1914 was the 60-pdr (127mm) heavy gun that had been adopted in 1904. While a considerable improvement over the weapons it was designed to replace, it was no match for its closest foreign analogue, the 135mm gun that had recently been put into production for the German Army. Though every bit as mobile as the 60-pdr and provided with the same sort of recoil mechanism, the latter weapon had a considerable advantage in range. Where the maximum range of the 60-pdr was 11,250m, that of the 135mm gun was 16,500m. The most important heavy field howitzer of the British Army of 1914 was similarly outclassed by its German counterpart. The 6in. BL ('breech-loading') howitzer had been designed in the years before proper recoil-absorbing mechanisms were available for weapons of that size. It was thus thoroughly obsolete by the standards of 1914. More than half of the German 150mm howitzers, on the other hand, were true quick-firing pieces. As a result, they could fire three or four rounds in the time that it took a 6in. howitzer to send one projectile into the air.

The officer responsible for providing weapons to the British Army – the Master General of the Ordnance, Sir Stanley B. von Donop – had long recognized the need to obtain modern heavy howitzers. In his view, the British Army needed both mobile heavy howitzers that could meet the needs of armies in the field and siege howitzers powerful enough to smash in the armoured turrets of modern fortresses. To that end, he authorized the design of three modern heavy howitzers – a mobile 6in. (152mm) howitzer comparable to the German 150mm heavy field howitzer, a mobile 8in. (203mm) howitzer comparable to the German 210mm heavy field howitzer and a 9.2in. (234mm) siege howitzer. By the time that these weapons were ready for production, however, the ordnance factories were busy with other projects – 18-pdrs, 4.5in. howitzers and 60-pdrs for the

The personal equipment of the British infantryman was well suited to the task of producing large volumes of highly accurate rifle fire. The contents of each of the ten ammunition pouches corresponded exactly to the capacity of the ten-round magazine of the Lee-Enfield rifle. This not only facilitated quick loading, but made it easier for a soldier to keep track of his personal ammunition supply. (NARA)

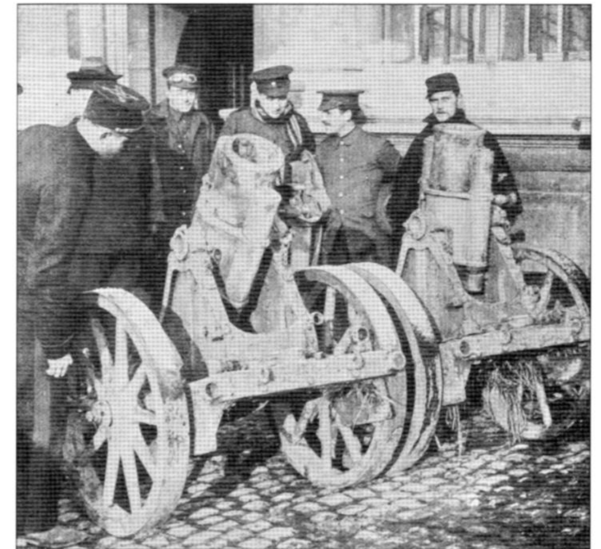
Heavy artillery pieces with the Expeditionary Force

Piece	1 September 1914	1 January 1915	1 July 1915
4.7in. gun	0	40	88
60-pdr gun	20	24	36
6in. gun	0	4	8
6in. howitzer	0	24	40
8in. howitzer	0	0	8
9.2in. howitzer	0	1	14
Total guns	20	68	132
Total howitzers	0	25	62

Expeditionary Force as well as heavier pieces for the Royal Navy and coastal defence. As a result, only one modern heavy howitzer – a 9.2in. siege howitzer with the appropriate name of 'Mother' – had been built before the outbreak of war. By July 1915, 22 additional 9.2in. howitzers, 49 modern 6in. howitzers and a dozen or so 8in. howitzers had emerged from the factories. As might be imagined, most of these were sent immediately to the Western Front. Very few, unfortunately, arrived in time for the great British attacks of spring 1915 – those at Neuve Chapelle, Aubers Ridge and Festubert.

While the British Army was waiting for the factories to produce a sufficient number of late-model artillery pieces, it had to make do with obsolescent weapons. The most prominent of these was the 4.7in. (120mm) heavy gun. These were guns that had been initially designed for naval use, had been converted into coast defence weapons and finally provided with carriages of the type used by field guns. Like most other naval ordnance of the day, the 4.7in. guns were optimized for long-range fire against armoured ships. As such, they had long barrels, relatively high muzzle-velocity, and a very short barrel life. When provided with new barrels, the 4.7in. guns were extraordinarily accurate. Unfortunately, by the time that 500 rounds had passed through a given barrel, the resultant damage to the internal surface was sufficient to deprive the gun of this virtue. The loss of accuracy in worn-out 4.7in. guns was so marked that British infantrymen of 1915 often joked that the piece was a 'strict neutrality' gun – a weapon that was just as likely to drop a shell on a friendly position as an enemy one. Notwithstanding this critical defect, the 4.7in. gun was used to equip 22 of the 31 heavy batteries sent to the Western Front during the first year of the war. (The other nine heavy batteries were equipped with 60-pdrs. Indeed, it was not until the very end of 1915 that the number of 60-pdrs on hand exceeded the available supply of 4.7in. guns.)

Most machine-gun sections serving with the Expeditionary Force were armed with either the old Maxim machine gun or the new Vickers machine gun. Some of the machine-gun sections of the Indian Corps, however, were armed with the Benet-Mercier light machine gun. A close cousin of the Hotchkiss machine guns that were soon to find a home in a number of British aircraft and tanks, this light machine gun fired the same .303in. ammunition as the other machine guns of the Expeditionary Force. (NARA)



Unilateral possession of trench mortars (such as the captured weapons shown here) gave the German Army a considerable advantage during the first winter of trench warfare. (Marcus Cowper)

Where the 4.7in. gun equipped both Regular Army and Territorial Force batteries, the second most prominent of the obsolescent artillery pieces to serve on the Western Front – the 15-pdr BLC field gun – was issued exclusively to Territorial Force units. The barrel and the ammunition for the 15-pdr BLC were those of the 15-pdr BL gun – a weapon that was already obsolete when it was used in the Boer War. The other elements of the weapon – the carriage, the recoil mechanism, the gun shield and the breech mechanism – were fully modern. The resulting combination was thus up-to-date in some respects and old-fashioned in others. The modern recoil mechanism, for example, gave the 15-pdr BLC the same sort of stable platform that was enjoyed with quick-firing guns. At the same time, the fact that the ammunition was of the old-fashioned separate-loading kind ensured a much quicker rate of fire. When combined with the fact that the shell fired by the 15-pdr was less powerful than that of the 18-pdr, this marriage of the old and the new meant that the weapon could be employed in the same manner as an 18-pdr, but with considerably less effect.

The 15-pdr BLC field gun did not spend much time on active service. The first to serve on the Western Front – those of the 46th (South Midland) Division – arrived in France in March of 1915. By June of 1915, a total of 1,099 field guns – 781 18-pdrs, 114 13-pdrs and 204 15-pdrs – were serving with Territorial Force divisions in France and Flanders. This would prove to be the high-water mark of the 15-pdr BLC on the Western Front. Soon thereafter, Territorial Force batteries began to exchange their 15-pdrs for factory-fresh 18-pdrs. This process was complete by the end of November 1915.

Because of delays in the production of 4.5in. howitzers, the 5in. howitzer spent more time on the Western Front than the 15-pdr field gun. It was not until the end of January 1916 that most Territorial Force divisions were equipped with 4.5in. howitzers. (One Territorial Force division even managed to hold on to its 5in. howitzers until May of 1916.) The importance of this weapon to the British Expeditionary Force was, however, greatly diminished by the small number of individual pieces deployed. The largest number of 5in. howitzers to serve on the Western Front at any given time was 48 (this was in June 1915). Even when the overall shortage of howitzers in the British Army of the first half of World War I is taken into consideration, the small role played by the 5in. howitzer was probably a good thing. For while the 4.7in. heavy gun and the 15-pdr BLC field gun were merely obsolescent, the 5in. howitzer was fully obsolete. In particular, the lack of a proper recoil mechanism meant that the 5in. howitzer had to be manhandled back into position each time a round was fired.

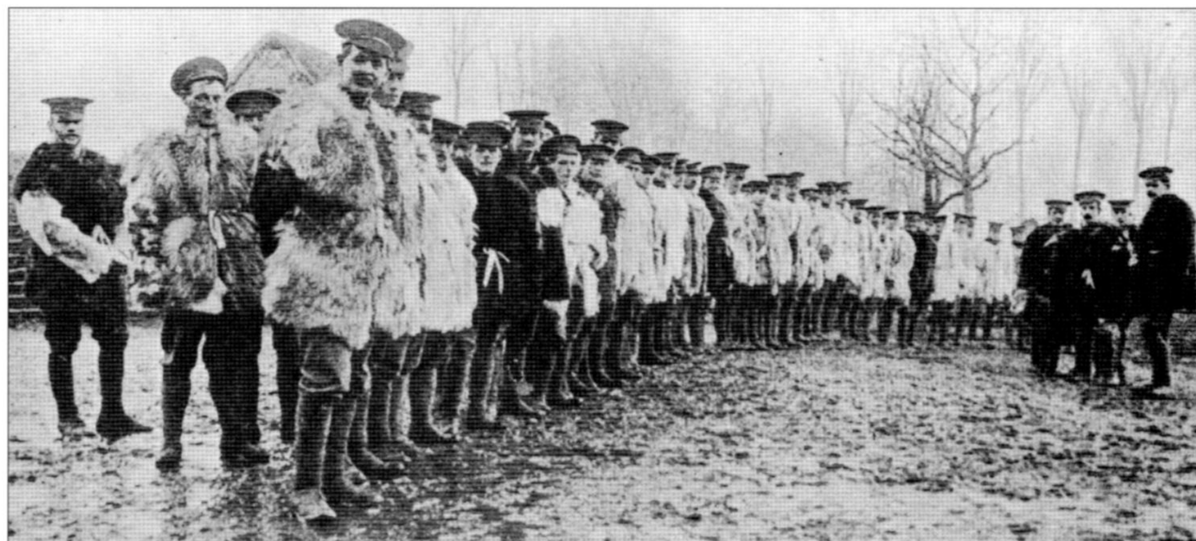
The best artillery piece in the Territorial Force inventory was the 15-pdr (75mm) QF field gun issued, at a rate of four guns per battery, to the 14 horse artillery batteries. Not to be confused with the

The new 6in. howitzers ordered by Sir Stanley von Donop in the autumn of 1914 would become the mainstay of the massive artillery bombardments conducted by the Expeditionary Force in 1916, 1917 and 1918. However, as they did not begin to emerge from the factories until the middle of 1915, these weapons played no role in the great battles of the first year of the war. (NARA)

Month	18-pdr field gun	4.5in. howitzer	60-pdr gun	6in. howitzer	9.2in. howitzer
August 1914	2	15	0	0	0
September 1914	0	0	0	0	0
October 1914	5	12	0	0	0
November 1914	8	4	0	0	0
December 1914	28	9	0	0	0
January 1915	45	5	0	0	0
February 1915	78	1	0	0	7
March 1915	115	31	0	0	3
April 1915	113	31	0	0	4
May 1915	200	46	14	14	2
June 1915	208	55	19	19	2
July 1915	270	51	16	16	2
August 1915	302	42	10	10	4
September 1915	316	58	16	16	2
October 1915	265	76	18	18	4
November 1915	265	88	23	18	2
December 1915	263	77	30	23	2

Production of artillery weapons, August 1914–December 1915

15-pdr BLC field gun, this was a true quick-firing piece with fixed ammunition and a first-class recoil mechanism. The 15-pdr QF guns had originally been purchased, as an emergency measure during the Boer War, from the German firm of Heinrich Ehrhardt. After the war, no attempt was made to fully integrate the weapon into the British arsenal – to provide, among other things, reliable sources of spare parts and ammunition. By 1914, this lack of spare parts had transformed more than 20 per cent of the existing stock of 15-pdr QF guns into 'hangar queens' – skeletons that had been stripped of essential components in order to keep the rest of the guns in working order. As this situation was only going to get worse, no 15-pdr QF guns were sent to the Western Front.



As a rule, the men of the Expeditionary Force were much better equipped for the first winter of positional warfare than their French or Belgian comrades-in-arms. Here, men who are about to do a spell in the trenches parade in goatskin overcoats. (Marcus Cowper)

Tactics

The Expeditionary Force that went to war in August 1914 was no stranger to trench warfare. The battles of the Boer War, which had done so much to shape the equipment, training and tactics of the pre-war British Army, had often been characterized by assaults upon fortified positions. British field artillery had been optimized to support such attacks, while British infantry was well trained in the technique of conducting them. Because of this, the onset of trench warfare on the Western Front caused very little consternation in the minds of British leaders. It would, they assumed, require very few changes in the way that the Expeditionary Force was organized, armed, trained or employed.

By the end of 1914, it became apparent that trenches dug by Germans in France and Belgium were a tougher nut to crack than trenches built by Boers in South Africa. While the Boers had been limited to simple trenches that they could dig in a matter of hours, the Germans were often able to spend weeks or even months building elaborate fortified positions, protected by barbed wire, festooned with machine guns and protected by artillery. The Germans, moreover, were much more tenacious when it came to defending their trenches. Where the Boers would often fade away before the British infantry launched its final assault, the Germans were much more likely to hold their ground.

This German machine-gun position was destroyed by a British howitzer shell that fell on top of it during the battle of Neuve Chapelle. Had the position been hit by a shell fired by a field gun, the sandbags in front of the position would have been damaged, but the position itself would have remained intact. (Imperial War Museum, Q49208)

The first British solution to the problem of how best to attack German fortified positions was suggested by the Germans themselves. As soon as trench warfare set in, they had started to conduct a number of small-scale attacks aimed at capturing discrete bits of terrain. These attacks had been characterized by the use of 150mm (5.9in.) and 210mm (8.2in.) howitzers to subject the objective of their attack to a short but intense 'hurricane bombardment'. This would cause so much destruction that the defenders of the trenches being attacked were unable to offer much in the way of resistance. The German infantry was thus able to rush forward, occupy the objective, and immediately begin the task of connecting it to the rest of the German trench system in the area.

For the Germans, the infantry attacks that followed the hurricane bombardments were 'attacks with limited objectives'. That is to say, the objective of the attack was to improve the German defences in a given area by seizing a discrete piece of terrain. More specifically, the idea was to seize terrain that allowed the Germans to hold a given area with fewer troops, thereby releasing forces for decisive employment on other fronts. For the Expeditionary Force of the late winter and early spring of 1915, the task at hand was the attraction of the largest possible number of German units to the British sector of the front, thereby directly reducing the pressure on the French and indirectly assisting the Russians. Because of this, the infantry attack that followed the hurricane bombardment would have to do more than capture a bit of forward trench. It would have to make a proper penetration of the German line and create a major crisis for their forces on the Western Front.

Adopting the German hurricane bombardment presented two problems for the Expeditionary Force. The first was the lack of suitable howitzers. In March 1915, the Expeditionary Force possessed only 32 artillery pieces of the type that

The Expeditionary Force fought over ground with a very high water table, which meant that any hole dug too deeply would quickly fill with water. To avoid this, many 'trenches' were not trenches at all, but earthworks made of sandbags. (Imperial War Museum. Q49369)

At the start of the war, only a small minority of the artillery projectiles issued to the Expeditionary Force were capable of producing the kind of explosion shown in this picture. Most, to include all of those provided for field guns, were shrapnel shells. These were designed to burst in the air, creating a nearly invisible shower of bullets. (Marcus Cowper)

played such a key role in the German technique. These 6in. (152mm) howitzers, moreover, were of an obsolete type that had a much slower rate of fire than their German counterparts. The second problem was the German fondness for filling the fields in front of their trenches with extensive barbed-wire obstacles. Unless these could be destroyed before an attack, they would impose an unacceptable delay upon the attacking British infantry, exposing them to German fire while giving the German defenders time to recover from the bombardment.

The problem of German barbed wire proved easier to solve than the shortage of heavy howitzers. In a series of experiments conducted behind the lines, British gunners discovered that shrapnel shells fired by 18-pdr field guns – projectiles that had been built to kill men and horses advancing over open ground – were capable of doing considerable damage to barbed-wire obstacles. Given a sufficient number of guns and a sufficient number of shells, any barbed-wire obstacle that the Germans might build could be quickly reduced to short strands of twisted metal lying on the ground. Cutting wire was not easy – the fire had to be extremely accurate, the fuses on the shells carefully calibrated and the distance between the gun and the target kept to a minimum. The necessary material, however, was at hand.

Dealing with the shortage of 6in. howitzers would prove more difficult. A handful of additional 6in. howitzers were available. Unfortunately, the Royal Garrison Artillery lacked the officers and men needed to form them into batteries. The 4.5in. howitzers serving with many British divisions on the Western Front could serve as a marginal substitute for the larger howitzers. These newer, smaller weapons shared many of the virtues of their older, larger cousins. In particular, they were very accurate when fired against trenches and other horizontal targets. The 17.5kg (40lb) shells fired by the 4.5in. howitzers, however, had but a third of the destructive power of the 55kg (120lb) projectiles fired by the 6in. howitzer. The 4.5in. howitzer was thus a first-class supplement to the 6in. howitzer but far from an adequate replacement for it. High-explosive ammunition for 4.5in. howitzers, moreover, was in very short supply during the winter and spring of 1915. Because of this, the Expeditionary Force tailored the size of the attacks it planned to carry out to the number of 6in. howitzers that could be made available.

These soldiers are probably not machine-gunners. The absence of field equipment and the wearing of Wellington boots suggests that they are members of a fatigue party working in a place of comparative safety. The poor condition of the machine guns, as well as the lack of either mounts or accessories, indicates that they are trophies taken from captured German positions. (Imperial War Museum, Q57757)

Combat operations

The Expeditionary Force carried out its first major attack against a German fortified position on 10 March 1915. The position in question was a double line of trenches wrapped halfway around the village of Neuve Chapelle. By itself, this village had little military value. Just east of it, however, was a piece of high ground known as Aubers Ridge. If the British captured this ridge, they would be able to dominate the surrounding countryside and perhaps even force the Germans to vacate some of their more exposed positions. At the very least, they would attract additional German forces to the area around Aubers Ridge, thereby proving to the French and the Russians that the British Empire was pulling its weight in the land war against the Central Powers.

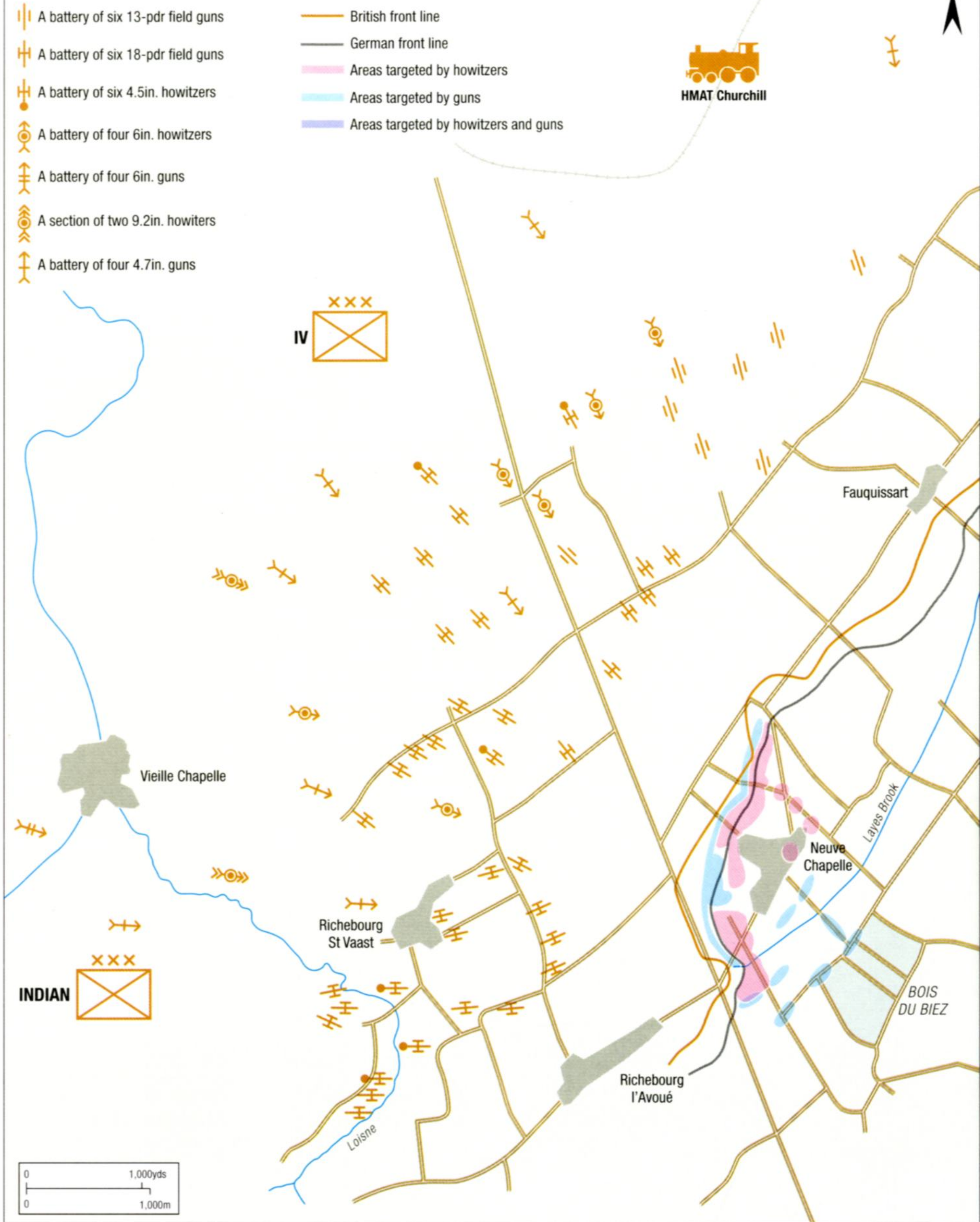
The Expeditionary Force allocated six batteries of 6in. howitzers – a total of 24 such weapons – to the attack at Neuve Chapelle. As one 6in. howitzer needed 20 minutes to thoroughly destroy a 50-yard section of the type of trench that the Germans had built in front of Neuve Chapelle, a hurricane bombardment using these 24 weapons could cover segments of the German position with a combined length of some 1,200 yards. As the entire German position in front of Neuve Chapelle was roughly twice as long as that, the fact that so few 6in. howitzers were available for the hurricane bombardment meant that an attack against the entire forward position was out of the question.

The plan that emerged in response to this limitation called for two separate assaults. The main assault would be directed against the northern portion of the German position. With a front of some 1,000 yards, it would make use of five of the six 6in. howitzer batteries allocated to the operation. A secondary assault, exploiting the fire of the single remaining battery of 6in. howitzers, would take place along the southern edge of the German position. In each assault, the 6in. howitzers would be reinforced by 18 4.5in. howitzers. In the main assault, these would bombard the support trenches some 100 yards behind the German forward trench. In the secondary assault, they would bombard the areas on either side of the German strongpoint.

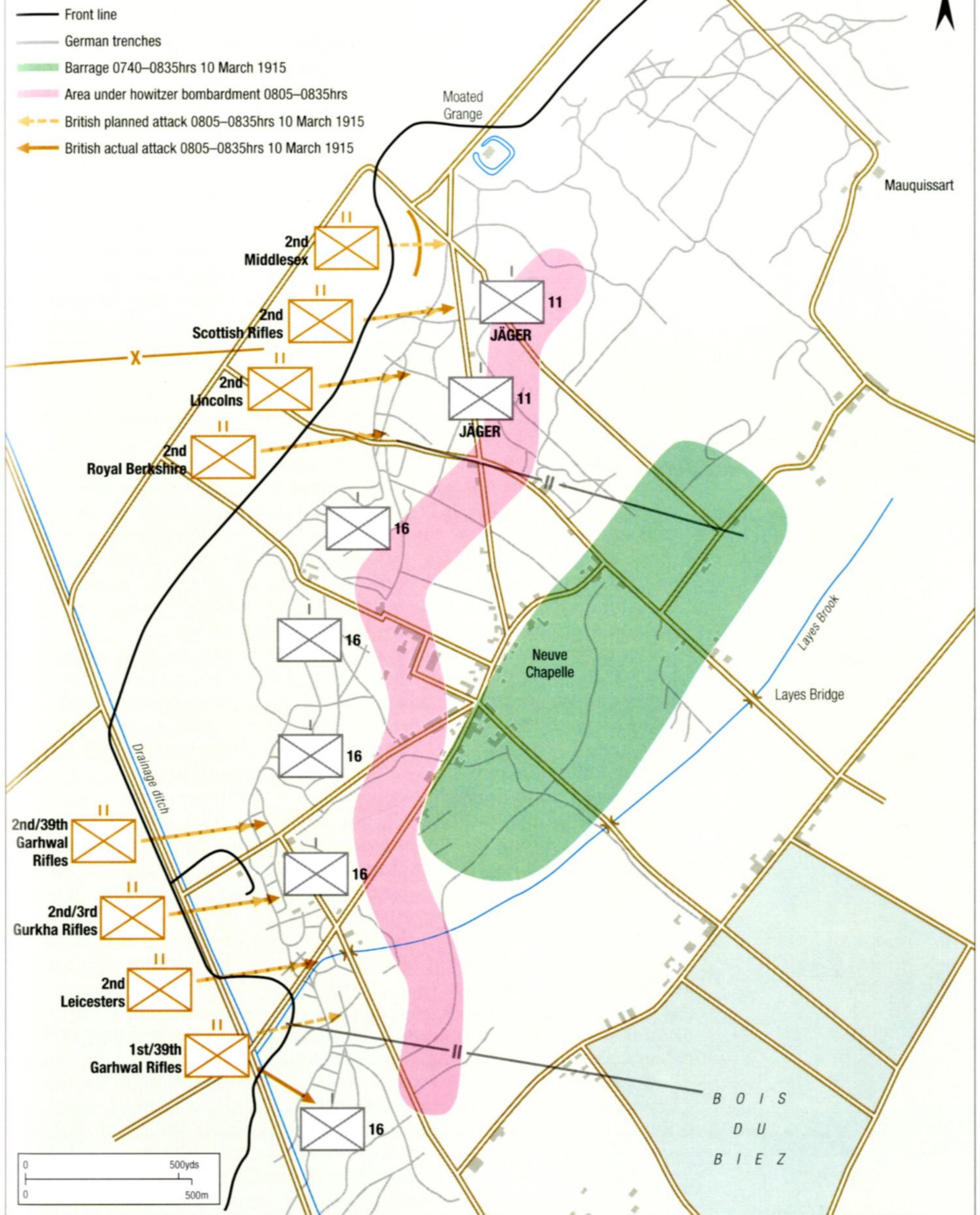
Nine battalions of infantry were assigned to the main assault. Four of these would lead the assault, rushing into the German forward trenches as soon as the howitzers stopped firing on them. For the next half hour, these battalions would consolidate their hold on the forward trenches while the howitzers fired on Neuve Chapelle itself. When that phase of the bombardment ended, the remaining five battalions would advance, passing through the trenches held by the first row in order to reach objectives on the far side of the village. The great strength of this plan was its simplicity. It great weakness was the failure to protect the open flank of the advancing infantry. With each step that the British battalions took towards the east, they became more vulnerable to the actions of Germans holding positions to their left, in that portion of the German defences north of the area to be bombarded and attacked. These actions might include small-scale attacks by parties of men moving along undamaged trenches or the fire of well-hidden machine guns.

Employment of heavy howitzers at Neuve Chapelle, Aubers Ridge and Festubert

	Neuve Chapelle 10–13 March 1915	**Aubers Ridge 9 May 1915**	**Festubert 15–25 May 1915**
6in. howitzer	24	36	36
9.2in. howitzer	3	9	9
Total howitzers	27	45	45
Frontage	1,350 yards	3,000 yards	3,000 yards
Yards per howitzer	54	67	67



The initial bombardment at Neuve Chapelle was the most effective bombardment conducted by the Expeditionary Force during the first two years of World War I. The two most important factors in its success were the high density of howitzer shells dropped on the German forward positions and the ability of 18-pdr shrapnel shells to cut the thin wire used by the Germans to construct obstacle belts.



The attack at Neuve Chapelle was led by eight infantry battalions – four from IV Corps and four from the Indian Corps. Thanks to the destruction inflicted by the preparatory bombardment upon the Germen positions in front of them, five of these battalions took their initial objectives in a matter of minutes.

Total number of heavy howitzer rounds fired at Neuve Chapelle, Aubers Ridge and Festubert

	Neuve Chapelle		Aubers Ridge		Festubert	
	Initial	Battle	Initial	Battle	Initial	Battle
6in. howitzer	3,364	2,440	3,767	0	2,848	3,056
9.2in. howitzer	243	515	619	0	443	394

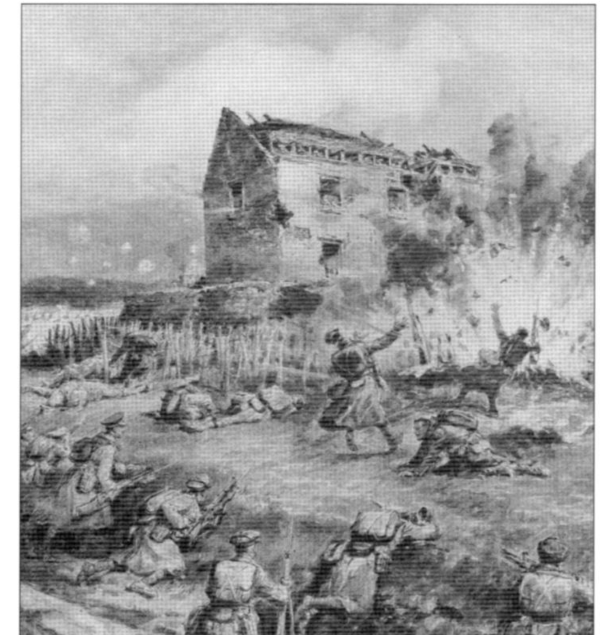
The plan for the secondary assault included measures designed to protect its open flank. The task of assaulting the strongpoint itself was given to three battalions, which used the same basic technique as the infantry units leading the northern attack. As soon as the howitzer shells stopped falling, they were to rush into the German position. To protect these battalions from any Germans located on the southern end of this attack, a fourth battalion was deployed as a flank guard. Attacking at the same time as the other three battalions, this unit would block all avenues that the Germans might use for a flanking attack as well as cover the positions from which the Germans might try to deliver flanking fire. While the other three battalions were arrayed in broader, more shallow formations, the flank guard battalion formed into two long columns of eight platoons each.

The British attack on Neuve Chapelle began at 0730hrs on the morning of 10 March 1915. The first act was an attempt to cut the German wire. For ten minutes, half of the 18-pdr field guns taking part in the operation (90 of 180) fired shrapnel shells at the barbed-wire obstacles standing between the British battalions and the German forward trench. The second act, beginning promptly at 0740hrs, was the hurricane bombardment itself. Twenty minutes later, the howitzers shifted their fire to targets behind the German forward position and the leading battalions began to move forward.

Five of the eight leading battalions – two in the north and three in the south – took their assigned sections of the German forward position with little in the way of difficulty or loss. The other three battalions, however, met with disaster. In the north, the battalion on the far left of the British line, the 2nd Middlesex, was stopped in front of the German wire. Its neighbour to the right, the 2nd Scottish Rifles, managed to take a portion of its assigned objective, but only at a very high cost in dead and wounded. In the south, the battalion serving as flank guard for the initial assault, the 1st/39th Garhwal Rifles of the Indian Corps, took a wrong turn when leaving its trenches. Aggressive to a fault, it compounded this error by assaulting a part of the German position that had not been bombarded at all, losing some three-quarters of its men in a successful attempt to take the wrong objective.

The catastrophe that befell the 2nd Middlesex and 2nd Scottish Rifles was entirely caused by a lack of accurate firing on the part of certain artillery batteries. In the case of the 18-pdr batteries that failed to cut the wire in front of these battalions, the reasons for this lack of accuracy were subtle ones. Minor mistakes in the setting of fuses or the aiming of the guns had prevented the shrapnel shells from bursting at the proper height. In the case of the two 6in. howitzer batteries that failed to destroy their assigned portions of the German forward trench, the cause was more obvious. These two batteries, which had only taken up their firing positions on the day before the attack, had been unable to properly register their pieces. As a result, very few of the 6in. howitzer shells aimed at those sections of the forward trench managed to hit them.

The five successful battalion assaults had occurred in the centre of the overall attack, creating a gap in the German line that was nearly a mile wide. This gap was wide enough to allow several fresh battalions to move into the village. The failure of the three other assaults to fully clear the German positions on the wings of the attack, however, prevented this movement from becoming a fully fledged exploitation. On the left end of the penetration, advancing British battalions had to run a gauntlet of machine-gun fire coming from German positions north of Neuve Chapelle. On the right, they were impeded by congestion on the one safe route leading into the village. Further delay was imposed by the two corps commanders involved in the operation, Sir Henry Rawlinson of IV Corps and Sir James Willcocks of the Indian Corps. Neither of these officers were willing to authorize the start of the advance towards Aubers Ridge until they were satisfied that the hole they had torn in the German line was fully secure. In their minds, this required that all of the original objectives in the old German forward trench be firmly in British hands. It also meant that two additional objectives just north of the north end of the German forward trench, would also have to be cleared. These, a large farm building known as the Moated Grange and a small orchard, were presumed to provide firing positions for the handful of German machine guns that had killed or wounded so many British soldiers in that area.



This contemporary painting shows men of the 2nd Battalion of the Middlesex Regiment advancing into the village of Neuve Chapelle in the late morning of 10 March 1915. Earlier that day, the 2nd Middlesex had advanced into intact German defences and, as a result, had suffered horrible losses. (Marcus Cowper)

The break-in at Neuve Chapelle – the initial bombardment, the taking of the forward German trenches and the occupation of the village itself – had taken just two hours. Satisfying the two corps commanders that it was safe to proceed with the advance upon Aubers Ridge required most of the rest of the day. The problem was less a matter of continued German resistance than of difficulties with command and control. That is to say, most (if not all) of the German resistance had been eliminated by 1300hrs. It was 1455hrs, however, before both corps commanders were sufficiently convinced of this fact to authorize the next phase of the operation. By this time the window of opportunity opened by the success of the initial attack had closed. Not only was nightfall approaching quickly, but the Germans had made use of the delay to bring up substantial reinforcements and establish a new line of resistance.

Between 1600hrs on 10 March and 1230hrs on 12 March, the British forces in Neuve Chapelle would make three attempts to break through this line. None of these, however, enjoyed the sort of success that had characterized most of the initial assaults. In their haste to break through the new German line before it became even stronger, the British dispensed with the careful preparations that had paid such handsome dividends on the morning of 10 March. Because of this, the attacks were confused affairs, characterized by gross misunderstandings on the part of various headquarters, poor shooting on the part of artillery units, and little in the way of progress. Early on the morning of 13 March, plans for a fourth attempt to penetrate the new German position were cancelled. At roughly the same time, the Germans decided that any further attempt on their part to retake their old line was not worth the cost.

Average number of rounds fired by each heavy howitzer at Neuve Chapelle, Aubers Ridge and Festubert

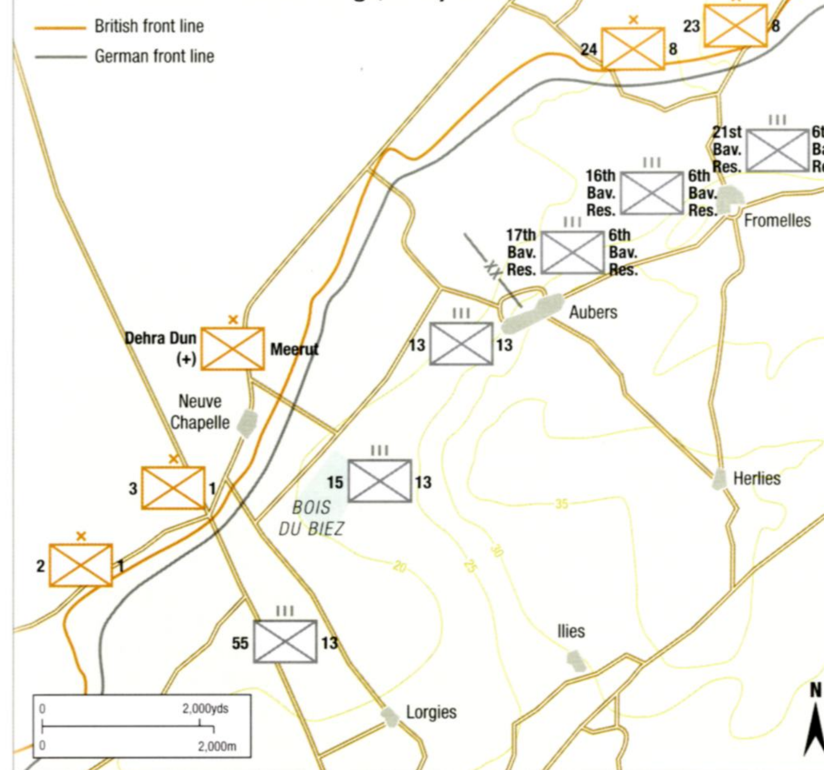
	Neuve Chapelle		Aubers Ridge		Festubert	
	Initial	Battle	Initial	Battle	Initial	Battle
6in. howitzer	140	102	105	0	79	85
9.2in. howitzer	81	172	69	0	49	44

The continuation of the attack at Neuve Chapelle, 10 March 1915

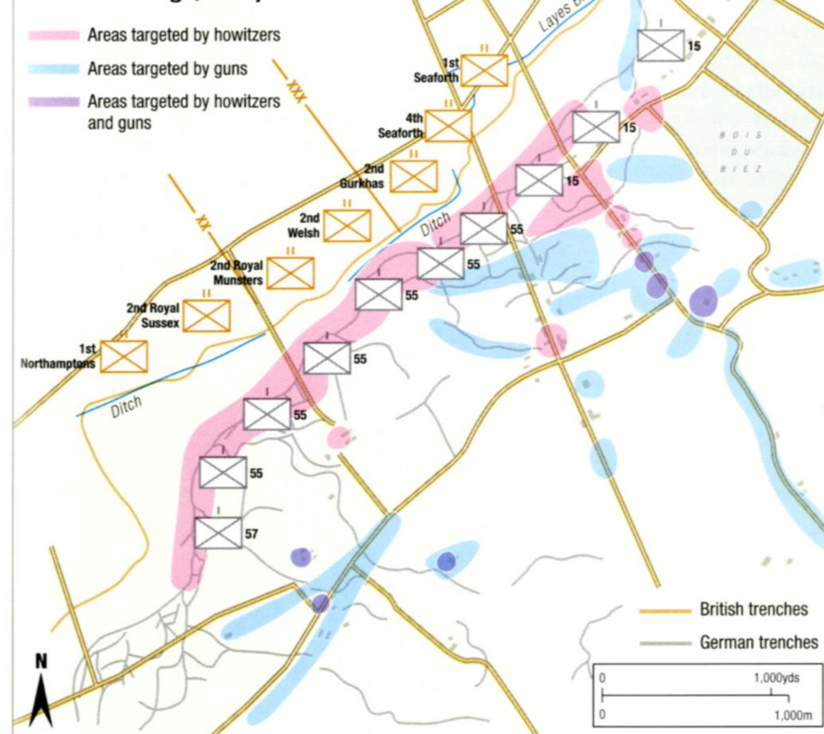
Front line
German trenches
Barrage 0835–1000hrs 10 March 1915

Moated Grange
Mauquissart
2nd West Yorks
2nd Middlesex
11 JÄGER
2nd Devons
2nd Scottish Rifles
2nd Royal Irish Rifles
2nd Lincolns
2nd Rifle Brigade
2nd Royal Berkshire
Neuve Chapelle
Layes Brook
Layes Bridge
Drainage ditch
2nd/39th Garhwal Rifles
2nd/3rd Gurkha Rifles
2nd Leicesters
16
1st/39th Garhwal Rifles
BOIS DU BIEZ
0 500yds
0 500m

In less than two hours, most British battalions that took part in the initial attack had reached their second objectives. Most of these were located on the eastern side of the main north–south road that run through the village of Neuve Chapelle.



The operation for Aubers Ridge consisted of two separate attacks. The larger of the two (the 'right attack') took place along the Rue de Bois. The smaller (the 'left attack') was named for the nearby village of Fromelles.



The larger of the two attacks at Aubers Ridge was carried out by two army corps of the First Army – I Corps and the Indian Corps. Thanks largely to the very low density of heavy howitzer shells in the initial bombardment and the many improvements that the Germans had made to their trenches, this attack resulted in unmitigated disaster for the participating battalions.

Number of heavy howitzer rounds per yard of frontage at Neuve Chapelle, Aubers Ridge and Festubert

	Neuve Chapelle		Aubers Ridge		Festubert	
	Initial	Battle	Initial	Battle	Initial	Battle
6in. howitzer	2.3	1.7	1.3	0	1	1
9.2in. howitzer	0.2	0.4	0.2	0	0.1	0.1

Two months after the battle of Neuve Chapelle, the Expeditionary Force launched its second major attack against a German fortified position. The plan for this attack, which was both aimed at possession of Aubers Ridge and named for it, was based on the assumption that the methods used at Neuve Chapelle had been sound ones. The British leadership believed that, with a few minor adjustments, a repetition of these techniques could lead to the same sort of penetration that had been achieved in the earlier attack. More specifically, they believed that using larger forces on a substantially broader front would decrease the chances that the forces exploiting the initial breakthrough would be delayed by flanking fire or traffic jams.

The most obvious problem with this plan was the lack of the right sort of artillery. Though the number of available 6in. howitzers, 4.5in. howitzers and 18-pdr field guns had increased somewhat, this growth did not keep up with the extension of the frontage to be bombarded. Thus, the ratio of 6in. howitzers to yards of frontage was reduced from one such weapon to every 60 yards of frontage to one to every 120 yards of frontage. Likewise, the ratio of 4.5in. howitzers to yards of frontage was reduced from one to every 40 yards to one to every 80 yards. The greatest decrease in density, however, was experienced by 18-pdr field guns. At Neuve Chapelle, there had been 180 of these weapons, one for every eight yards of German trench to be assaulted. For the battle of Aubers Ridge, there were 240, one for every 18 yards. Some compensation for this great reduction in firepower was provided in the form of obsolete weapons, a handful of 15-pdr BLC guns and 5in. howitzers belonging to Territorial Force divisions that had recently arrived in France. The length of time allotted to the bombardment was also increased by five minutes. Neither of these measures, however, changed the simple fact that the initial bombardment at Aubers Ridge would be far less intense than the one which signalled the start of the battle of Neuve Chapelle.

Employment of 6in. howitzers at Neuve Chapelle, Aubers Ridge and Festubert

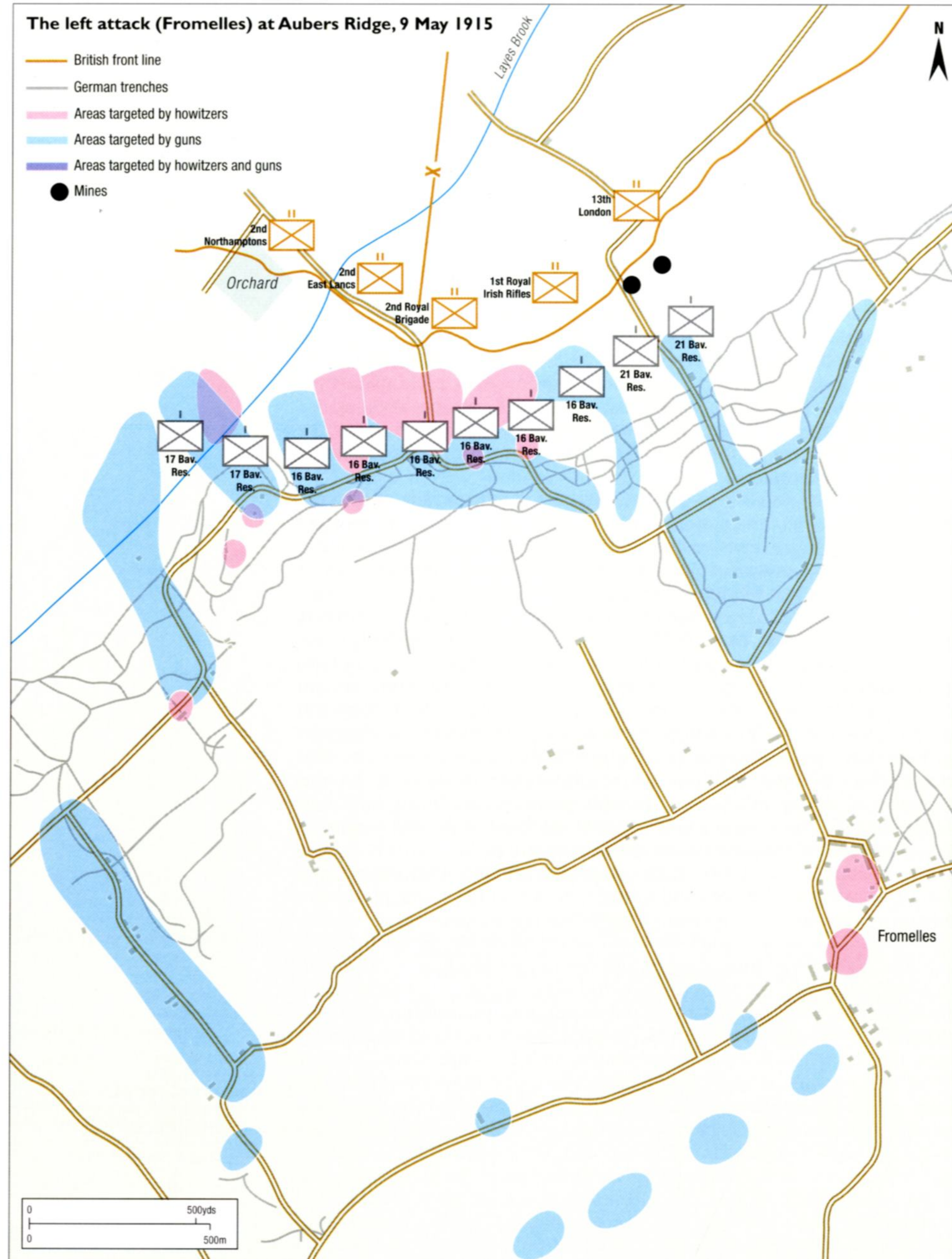
	Neuve Chapelle 10–13 March 1915	Aubers Ridge 9 May 1915	Festubert 15–25 May 1915
Number of 6in. howitzers available for the initial bombardment	24	36	36
Frontage to be attacked in the initial assault	1,450 yards	3,000 yards	3,000 yards
Yards of frontage per howitzer	60	83	83
Total number of 6in. howitzer rounds fired before the initial assault	3,364	619	443
Average number of rounds fired by each 6in. howitzer before the initial assault	140	105	79
Average number of 6in. howitzer rounds fired on each yard of the frontage to be attacked	2.3	1.3	1

To make matters worse, the Germans had learned lessons of their own from the first attempt to take Aubers Ridge. In the two months since the end of the battle of Neuve Chapelle, they had done much to strengthen their defences. They increased the number of men holding their positions, trebled the thickness of their sandbag parapets and greatly increased the depth of their barbed wire obstacles. To decrease the effect of British shrapnel shells upon those obstacles they placed some of the entanglements in protective ditches and strengthened others by using thicker wire. In case these measures proved insufficient to prevent the British from taking their forward positions, they also built up their support line, placed additional barbed-wire obstacles in the intervening terrain and created a series of communication trenches that, in case of need, could be used to help contain a hostile breakthrough.

The reduced power of the British artillery combined with the increased strength of the German defences to turn the battle of Aubers Ridge into an unmitigated disaster for the Expeditionary Force. Of the 12 battalions that led the British attack on the morning of 9 May 1915, only three managed to reach the German front line. The rest were stopped before they could make their way through the belt of barbed-wire obstacles. In the course of the long day that followed, the First Army would make two more attempts to break the German line. Neither of the subsequent attacks, however, made any more progress than the first.

By nightfall, it was clear to General Haig that bombardments of the type that had preceded all three attacks were not having the desired effect upon the German positions. He therefore decided to change his tactics. On the evening of 9 May, he issued orders for a fourth attack. This attack, to begin at noon on the following day, was to start with a four-hour bombardment of the German forward position by 6in. howitzers. As these were in short supply, the overall size of the attack was considerably reduced. Rather than involving three separate army corps, it would take place entirely within the sector of I Corps. By the morning of 10 May, however, it had become clear that even this cut-down operation was beyond the means of the First Army. The artillery was running out of shells. While they would be able to carry out the afternoon bombardment, any subsequent attack would find their magazines bare. Thus even if the exhausted, confused and much-reduced battalions of I Corps succeeded in taking the German forward positions, the attack would be stopped by the German second line. General Haig therefore decided to suspend the operation until the ammunition situation improved.

The attempt to take Aubers Ridge resumed on 15 May 1915, with a new name (the battle of Festubert) and a new approach to the taking of German defensive positions. The hurricane bombardment was discarded, as was the idea of the unlimited exploitation of the initial penetration. In place of these techniques, the First Army adopted the French technique of a slow, well-observed and frequently corrected bombardment followed by a short, sharp infantry attack with a well-defined and strictly limited objective. Over the course of the ten days that followed, this technique served the Expeditionary Force about as well as it was serving the contemporary French Army. That is to say, it led to a series of small but costly victories, tiny tactical triumphs that failed either to recover much in the way of French territory or reduce the pressure on the increasingly hard-pressed Russians. Unfortunately, the absence of modern heavy howitzers in the French and British arsenals meant that the only alternative to such operations was an entirely defensive posture, one that might well have led the Russians to conclude a separate peace. The battle of Festubert was thus a harbinger of things to come, the first of a long series of frustrating, seemingly futile battles that would only end with the arrival of large numbers of modern heavy howitzers.



The smaller of the two attacks at Aubers Ridge was carried out by IV Corps. One of the most important factors in the initial success of this attack was the blowing of two mines, which had been dug in the weeks before the attack by Royal Engineer tunnelling companies.

Lessons learned

Of the many lessons learned by the Expeditionary Force in the first year of World War I, the most important by far was the need to precede any attack upon a well-fortified section of the German frontlines with a hurricane bombardment. Short but intense, and composed largely of shells fired by heavy howitzers, the hurricane bombardment was the only available way of getting friendly soldiers across no man's land and into the German trenches without losing the vast majority of them. Unfortunately, the gap between learning this lesson and being able to apply it on a large scale was considerable. By the time that the British military leadership realized the critical role of heavy howitzers, British arms makers were already hard at work building weapons of other sorts. Similarly, well before the relevant authorities realized the enormous need for howitzer shells, they had put in motion a massive programme to make ammunition for heavy guns. Thus, in the long queue that stretched from the order books of factories to the production floor, artillery pieces and projectiles of the types that had successfully smashed so much of the German front line at Neuve Chapelle were well behind guns and shells of marginal or even doubtful utility.

As a result, the Expeditionary Force would, for the rest of 1915, be forced to imitate the slow and anaemic bombardment methods developed by the French – methods that tried to compensate for the absence of the right sort of material with a lavish expenditure of time. This new method was unfortunate in two respects. From the point of view of immediate tactical results, it allowed the Germans time to establish and fortify a new line of resistance well before the old one had been properly destroyed. From the point of view of the further development of the British system of command and control, it masked one of the major problems that had emerged during the battle of Neuve Chapelle – that of the proper role of corps commanders in a breakthrough battle. At Neuve Chapelle, corps commanders had delayed the effective exploitation of the initial success by attempting to manage the movement of brigades. As it took several hours for information provided by brigade headquarters to make its way to corps headquarters, be turned into a decision, and then make its way back to brigades, the inclusion of the commanding generals of army corps in the decision-making process did more to slow the progress of British battalions in the course of the first day of the battle than anything the Germans did. Had the means for further hurricane bombardments been available, this problem would have become so painfully obvious that it would have been addressed. As it was, the replacement of bombardments that lasted less than an hour with bombardments that lasted for several days had the pernicious effect of preserving corps commanders from the consequences of their micro-management. Thus, by the time that the Expeditionary Force had regained the ability to conduct hurricane bombardments, its system of command and control had become a hindrance, rather than a help, to the effective exploitation of their devastating effects.

Chronology

1907
12 January The War Office orders the formation of the Expeditionary Force.

1908
2 August Parliament passes the Territorial and Reserve Forces Act, which creates both the Territorial Force and the Special Reserve.

1914
4 August Great Britain declares war upon Germany.
5 August The British Army begins to mobilize.
5 August An ad hoc 'Council of War', composed of senior military and political leaders, decides to send the entire Expeditionary Force, less two infantry divisions, to France. At this same meeting, the two 'armies' into which the Expeditionary Force had been organized are replaced by three 'army corps'.
12 August British units begin to arrive in France. The vast majority of units travel by sea. Sixty or so aircraft of the Royal Flying Corps, however, fly across the English Channel.
14 August British formations begin to move from their ports of disembarkation to their places of concentration on the left flank of the French Fifth Army.
21 August Composed of two army corps and a reinforced cavalry division, the Expeditionary Force begins its advance towards the Belgian city of Mons.
22 August C Squadron, 6th Dragoon Guards, is the first unit of the Expeditionary Force to fire upon German troops.
23 August II Corps encounters elements of the German First Army at Mons, inflicting heavy losses while protecting the left flank of the French Fifth Army.
24 August The French Fifth Army retires, forcing the Expeditionary Force to conduct the famous 'Retreat from Mons'.
24 August The 4th Division arrives on the Continent, bringing the combined strength of the Expeditionary Force to five infantry divisions and five cavalry brigades.
26 August II Corps conducts a successful but costly rear-guard action at Le Câteau.
5 September The long retreat ends, the battle of the Marne begins.
6 September The cavalry is reorganized into two divisions, the Cavalry Division (three brigades) and Gough's Force (two brigades).
10 September The French and British victors of the battle of the Marne begin to pursue the retreating Germans.
12 September The Germans make a stand on the line of the Aisne River. The battle of the Aisne begins.
13 September The 6th Division lands in France.
13 September Gough's Force becomes the 2nd Cavalry Division.
15 September Both the German and the French armies attempt to outflank each other to the north, thereby starting the 'Race to the Sea'.
19 September The 1st Siege Brigade joins the Expeditionary Force.
20 September The Royal Marine Brigade and the Oxfordshire Yeomanry land at Dunkirk.
30 September The Indian Corps lands at Marseilles.
4 October The Royal Marine Brigade, acting as the advanced guard of the Royal Naval Division, arrives at Antwerp.
6 October French forces begin to occupy British positions on the Aisne. As they are relieved, units of the Expeditionary Force board trains bound for Flanders.
7 October The 7th Division, intended for the defence of Antwerp, lands at Zeebrugge.
8 October Belgian and British forces evacuate Antwerp.
8 October The 1st and 2nd Cavalry Divisions are formed into the Cavalry Corps. The 3rd Cavalry Division, originally intended for the defence of Antwerp, lands at Ostend.
9 October The Expeditionary Force begins to arrive in Flanders.
10 October II Corps encounters German forces at La Bassée, starting a battle that lasts until 2 November.
22 October The battle of First Ypres begins.
25 October The 3rd Cavalry Division joins the Cavalry Corps.
7 November The 8th Division joins the Expeditionary Force.
22 November The battle of First Ypres ends.
23 December The 27th Division joins the Expeditionary Force.
26 December The six army corps of the Expeditionary Force are formed into two armies.

1915
18 January The 28th Division, the last of the divisions formed mostly of units of the peacetime Regular Army, arrives in France.
8 March The first Territorial Force division to join the Expeditionary Force, the 46th (North Midland) Division, arrives in France.
10 March The First Army attacks at Neuve Chapelle in the hope of tearing a hole in the German line and capturing Aubers Ridge.
13 March The battle of Neuve Chapelle ends.
22 April The German Fourth Army releases chlorine gas against French troops near Langemarck, thereby starting the battle of Second Ypres.
5 May The last of the series of six Territorial Force divisions assigned to the Expeditionary Force in 1915, the 51st (Highland) Division, arrives in France.
9 May The First Army makes its second attempt to capture Aubers Ridge. The attack, known as the battle of Aubers Ridge, is called off after one day of fighting.
12 May The first of the New Army divisions to join the Expeditionary Force, the 9th (Scottish) Division, arrives in France.
15 May Using very different tactics, the First Army makes its third attempt to capture Aubers Ridge.
25 May The battle of Second Ypres ends.
27 May The third attempt to capture Aubers Ridge, known as the battle of Festubert, ends.
27 May Sir John French, Field Marshal Commanding-in-Chief of the Expeditionary Force, informs the War Office that he must cease offensive operations until the Expeditionary Force can rebuild its stocks of artillery ammunition.

Further reading

For a thorough treatment of the British Expeditionary Force during the first year of World War I, the best single source remains the relevant volumes of the *Official History of the War*. Written by Sir James Edmonds as part of the sub-series called *Military Operations, France and Belgium*, these books are both comprehensive in scope and balanced in presentation. They are, furthermore, based on meticulous research, which included consultation of relevant German and French sources.

True to their titles, the various volumes of *Military Operations, France and Belgium*, are primarily concerned with operational matters. There is thus a great deal of attention paid to battles and relatively little to such matters as organization, administration and training. The best way to delve into these subjects is to read the many histories of particular units and formations that were published in the 1920s and 1930s. Commissioned by various regimental associations and veterans' groups, these were either written by a man who had served in the unit in question or by a professional military historian hired for the task. As a result of this unique combination of writing talent and a very well-informed audience, the quality of British regimental and divisional histories tends to be quite high. Thanks, moreover, to the recent increase in interest in World War I, a large number have been republished.

In the 1940s and 1950s, the literature on the subject of World War I was eclipsed by books dealing with World War II. When, in the 1960s, books on the Great War began to appear again, they were often burdened by an excessive concern for the reputations of various commanders. While the resulting controversies did much to spark popular interest in World War I, they often created more heat than light. One of the great exceptions to this general trend is John Baynes' *Morale: A Study of Men and Courage*, which appeared in 1967. Though thinly disguised as a general treatise on human bravery, this work is, in fact, the story of a particular battalion, the 2nd Battalion, Scottish Rifles. Rather than having been written for the veterans of that unit, Baynes' book was aimed at a generation of readers with no personal experience of World War I. Because of this, he took pains to explain many things that the writers of earlier regimental histories assumed that their readers would know. This makes *Morale* an excellent introduction into the older regimental and divisional histories as well as a book that is worth reading in its own right.

Index

References to illustrations are shown in **bold**.

aeroplanes 73
Allenby, Major General Edmund **12**, 21
ammunition columns 56
anti-aircraft detachments 42–43, 58
Antwerp **5**, 9, 22
Argyll and Sutherland Highlanders 24, 25
  2nd Bn **75**
Army, First 21, 22, 23, 73, **87**, 89
Army, Regular 5, 7, 9
  divisions 57–60
  improvised 12
  infantry battalions 25–26
  mobilization 18
  units, peace and war establishments 10
Army, Second 21, 22, 73
Army, Third 22
Army Council 30
'army' headquarters 67, 68
Army Reserve 18
Army Service Corps 65
'army' signal company 70
artillery, divisional 14
  headquarters 68, 69
artillery, horse 34, 36
  see also Royal Horse Artillery
artillery batteries 33–34
  field 34, 35–36
  heavy 10, 14, 18, 41–42
  mountain 34, 43
  New Army 40–42
  regular 34, 38, 41
    numbering/lettering 38
  Territorial Force 38–40
artillery brigades 50, 53–55
  field 54, 55, 56
  headquarters 54, 55
artillery units 18, **33**
Aubers Ridge, battle of 76, 81, 84, 85, **87**, 88–89, **90**

band, New Army battalion **29**
barbed wire, German 79, 80, 89
battalions, infantry 23, 25–29
  four-company structure 25, 31
  headquarters 23
  New Armies 28–29
    band **29**
  Regular Army 25–26
  Territorial Force **26**, 26–27
    second-line 27–28
Belgian Army 14
Boer War (1899–1902) 7, 9, 15, 42, 79
brigades 50–55
  see also artillery brigades; cavalry brigades
  infantry 51–52
    headquarters **51**, 51, 52
  planned independent, evolution of 21
British coastal defences 5–6, 37, 38

Campbell-Bannerman, Sir Henry 9
Canadian Division, 1st 14, 22
cavalry brigades 10, 12, 14, 50, 52–53, 64
  1st–4th 14
  5th 14, 21, 64
  headquarters 53
Cavalry Corps **12**, 14
Cavalry Division **12**, 19, 21
Cavalry Division, 1st 63–64
Cavalry Division, 2nd 64
cavalry divisions 63–64
  headquarters 67–68
cavalry machine-gun sections **31**
cavalry regiments 10, 11, 12, 18, 46–50, **47**
  regular 48
  reserve **17**
  Yeomanry 48–49
cavalry squadrons, divisional 49
Channel Ports 9
Corps, I 22, **87**, 89
Corps, II 22
Corps, IV **14**, **83**, **90**
Corps, VI 22
Corps, VII 22
Corps, X 22
corps, organization 22–23
corps, 'triangular' 22
cyclist battalions 27
cyclist companies, divisional 49–50

divisions 56–64
  see also cavalry divisions
  infantry 10–11, 12, 14
    1st 12, 14, 19, 21, 59
    2nd 12, 14, 19, 21, 59
    3rd 12, 14, 19, 21, 59
    4th 12, 19, 21, 59
    5th 12, 14, 19, 21, 59
    6th 12, 14, 19, 21, 59
    7th 12, 49, 58, 59
    8th 12, 49, 58, 59
    9th 12, 62
    12th 12, 62
    14th 12, 62
    15th 12, 62
    17th 12
    19th 12, 62
    20th 12, 62
    27th 12, 59, 60, 62
    28th 12, 59, 60, 62
    29th 59
    46th–51st 12
    headquarters 66–67
    improvised 59
    joining the BEF 12
    Lahore 12
    Meerut 12
    New Army 57, 61–63
    Regular Army 57–60
    Territorial Force 60–61
  New Army 4, 12, 22, 57, 61–63
  Territorial Force 4, 12, 14, 22, 60–61
doctrine 15–17
Dorsetshire Regiment 24, 27
Duke of Cornwall's Light Infantry 24, 27

engineer companies 10, 14, **43**, 43–45
engineers, divisional headquarters 68, 69
equipment **76**, **78**
Europe (August 1914) **4**

fatigue party **80**
Festubert, battle of 76, 81, 84, 85, 88, 89
Foch, Ferdinand 7, 9
France, *entente cordiale* 7
French, Field Marshal Sir John Denton Pinkstone **14**, 21
French Army 7, 14, 91
  artillery 35, 36
  brigades 50
  cooperation with 22
  doctrine 15
  weapons 75
French Navy 7

Garhwal Rifles, 1st/39th **83**, 84, **86**
General Headquarters 22, 66, 71, 73
German Army
  artillery 35, 36
  barbed wire 79, 80, 89
  brigades 50
  doctrine 15
  Fifth Army 9
  First Army 9
  heavy howitzers 16, 17
  machine-gun position **79**
  tactics 79
German plans 9
German prisoners **26**
Grierson, Lieutenant General Sir James 21, 22
growth of the BEF 9–12, 14
  infantry divisions 10–11
Guards, Brigade of 26
Guards Division 14

Haig, Lieutenant General Sir Douglas **12**, 21, 22, 89

Haldane, Richard Burdon 9–11, **18**
Handforth, Lancs. **26**
headquarters
artillery brigades 54, 55
cavalry divisions 67–68
formation 66–68
General 22, 66, 71
infantry battalions 23
infantry brigades **51**, 51, 52
specialized 68–69
Hickman, Major General Hugh P. 16
horse, regiments of 48–49
horses 18, 38, **47**, 56
see also mules
Household Cavalry 46, 48

Indian Army 16, 31, 56, 57
Indian Cavalry Corps 14
Indian Corps **82**, **83**, 84, **87**
machine-gun section **76**
Infantry Brigade, 19th 52
Infantry Brigade, 21st, headquarters **51**
infantrymen, British **76**, **78**
Italy 7

King's Royal Rifle Corps 24, 26
Kitchener, Horatio H., Earl **30**, 30

Liverpool Regiment 24, 27
Llandudno **29**
logistics units 65

machine-gun batteries, motor 32–33
machine-gun sections 30–31, **31**, **76**
cavalry **31**
Marne, the 9
Maxse, Sir Ivor **25**
men serving with BEF 11
Middlesex Regiment 24, 25, 26
2nd Bn **83**, 84, **85**, **86**
mission 7, 9–12, 14
mobilization 17–18, 21
Mons, advance to (21 August 1914) **8**
motor machine-gun batteries 32–33
mounted battalions 10, 11–12
mounted brigades 52–53
Mounted Division, 2nd 64
mounted divisions 63–64
Territorial Force 56–57
mounted units 48–49
mules **35**, **36**
see also horses

Neuve Chapelle, battle of **26**, **36**, 76, **79**, 81, **82**, **83**, 84–85, **85**, 88, 91
New Army
artillery batteries 40–42
heavy 41–42
cyclist company, divisional 50
divisions 4, 12, 22, 57, 61–63
infantry battalions 28–29
band **29**
infantry company **29**
infantry divisions 57, 61–63
New Army, First (K1) **12**, 12, 31
New Army, Second (K2) 12
New Army, Third (K3) **29**
Nicholas I, King of Montenegro **12**
Northumberland Fusiliers, 10th Bn **29**

officers serving with BEF 11
operations, combat 81, 84–85, 88–89
organization, 'flat' 20–21, 22
organization, planned 20

pioneer battalions 30

Rawlinson, Sir Henry **14**, 85
regiments, 'double-size' 26
regiments, infantry 24, 25
regiments of horse 48–49
Reserve, Special 11, 18–19
engineer companies 45
reserve regiments, cavalry **17**
reservists, role of 18–19
Rifle Brigade 24, 26
Royal Artillery 34
Brigadier General 68
commander 68
Royal Dublin Fusiliers 24, 25
Royal Engineers 18, 30, **43**, 43–45, 57, **90**
Colonel 68
signals units 69–72
Royal Field Artillery 34, 38
Royal Flying Corps 72–74
Royal Fusiliers 24, 26
Royal Garrison Artillery 5–6, 16, 18, 34, 37, 38, 39, 80
anti-aircraft detachments 42–43, 58
Royal Horse Artillery 34, **36**, 37, 38
Royal Monmouthshire Royal Engineers 45
Royal Navy 7
Royal Scots (Lothian Regiment) 24, 27
Russian Army 35
Russo-Japanese War (1904–05) 16

sandbags **79**
Scottish Rifles, 2nd Bn **83**, 84, **86**
scout sections **15**
sergeant, Argyll and Sutherland Highlanders **75**
shooting skills **30**
signal squadron 71–72
signals units 69–72
Smith-Dorrien, Sir Horace 22
smiths, shoeing **36**
Spain 7
strength 11
support units 12, 14, 26

tactics 79–90, 91
Territorial Force 7, 12
artillery batteries 38–40
divisions 4, 12, 14, 22, 60–61
East Surrey Regiment, 5th Bn **31**
engineer companies 44, 45
Honourable Artillery Company **19**, 27
infantry battalions **26**, 26–27
second-line 27–28
infantry divisions 60–61
Irish Horse 49
King Edward's Horse 48–49
London Regiment 27
mobilization 18
Monmouthshire Regiment 27
mounted divisions 56–57
Yeomanry regiments 48, 61, 63
training **16**, **17**, 18–19, **29**, **30**
trenches 79

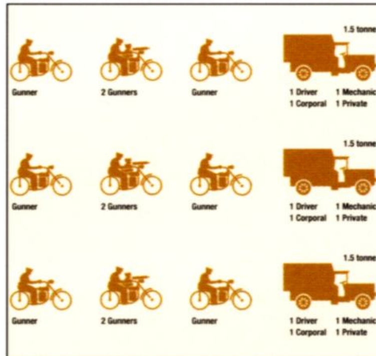
Verdun 9
von Donop, Sir Stanley B. **16**, 75, **77**

War Office 9, 14, 25, 31, 33, 41, 42, 64
weapons 17, 74–78
artillery pieces, heavy 75–76
artillery production (August 1914–December 1915) 78
artillery projectiles 75, **80**, 80, 84, 85, 88
French Army 75
guns
4.7in. heavy **37**, 37, 39, 41, 59, 60, 76–77
13-pdr field **36**, 54, 59
15-pdr BLC field 39, 60, 77, 88
15-pdr QF field 77–78
18-pdr field 38, 41, 58, 59, 60, 75, 77, 80, 84, 88
60-pdr heavy 16, 17, 37, 41, **74**, 75
German 135mm 75
Maxim 37mm 'pom-pom' **42**, 42, 58
howitzers
4.5in. 38, 41, 54, 57, 58, 59, 60, 65, 75, 77, 80, 88
5in. **39**, 39, 60, 77, 88
6in. 16–17, 37, 39, 54, 75, **77**, 79–80, 81, 84, 85, 88, 89
8in. 17
9.2in. 76, 81, 85, 88
German 16, 17
German 150mm 75
heavy **16**, 16–17
machine guns **80**
Benet-Mercier .303in. light **76**
Maxim 30
Vickers 74, **75**, 75
mortars, trench **77**
rifle, Lebel Model 1886: 74
rifle, Lee-Enfield, Short Magazine 74
Royal Garrison Artillery 6
West Riding Regiment 24, 25
Western Front (1 January 1915) **13**
Willcocks, Sir James 85
Wilson, Sir Henry 7, 9
Worcestershire Regiment 24, 26

Yeomanry regiments 48–49, 61, 63

Command, deployment, organization and evolution of forces in battle, describing elements of doctrine, training, tactics and equipment

Photographs



Organization charts

Full colour maps

Unrivalled detail

The British Expeditionary Force 1914–15

Over 200 divisions fought on the Western Front during the first year of World War I, and those best suited to the challenges of trench warfare were the six infantry divisions of the original British Expeditionary Force (BEF). Their superiority was partially due to the high quality of the divisions' personnel and the first-class equipment provided to them. This book describes the organization and equipment of the BEF at the outbreak of the war in 1914, and relates how its structure changed both to accommodate the waves of Territorial and New Army units that were raised and to adapt to the rigours of conditions on the Western Front.

ISBN 1-84176-902-9

OSPREY
PUBLISHING

www.ospreypublishing.com