

# Special edition



## *'All bar the shouting'*

How logistics  
provided the  
key to victory

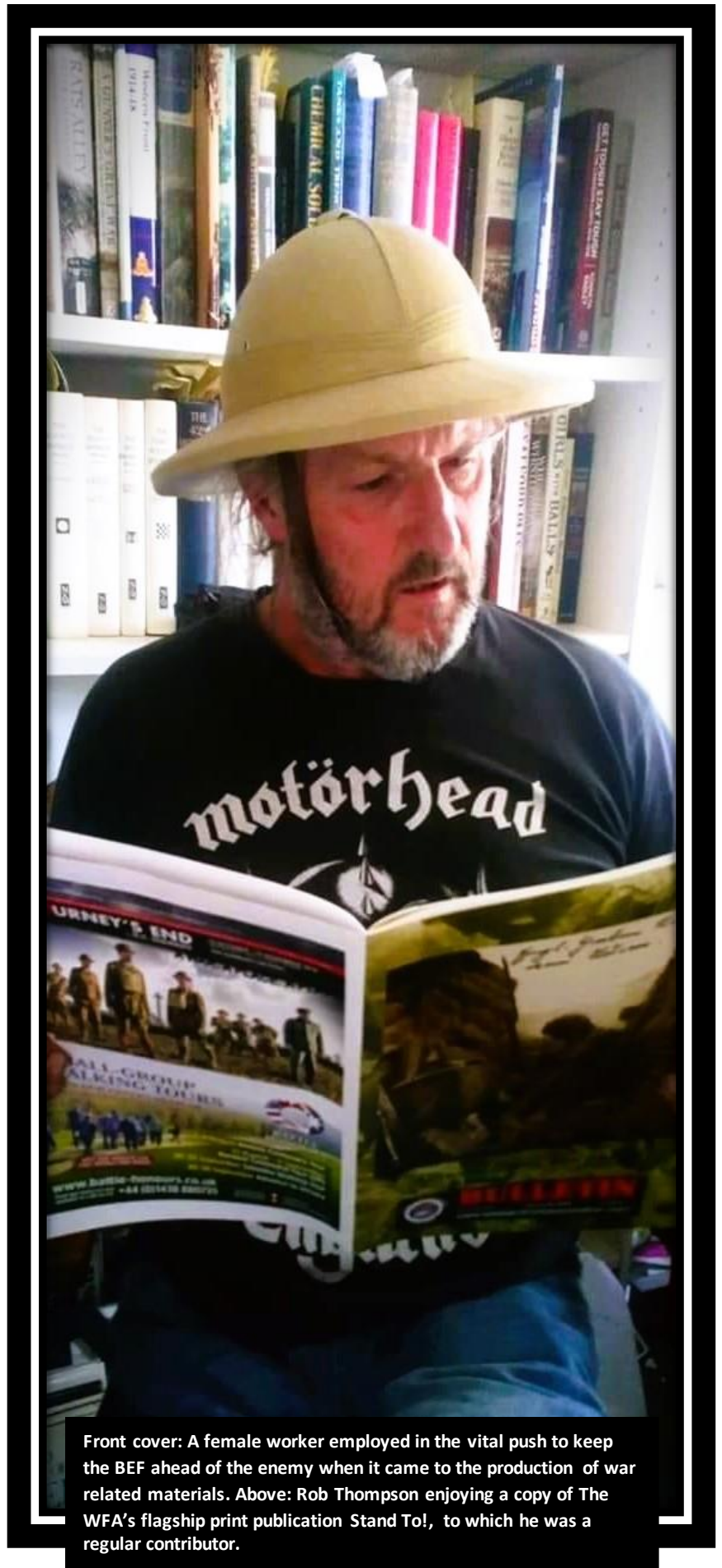


A tribute to the life and  
work of Rob Thompson

# INSIDE

- **1914:** Preparing the BEF for conflict and transportation overseas; and the role that the German naval attack at Scarborough played in pushing Britain down the road to readiness for 'total war'.
- **1915:** The different challenges faced by the planners on the Western Front and at Gallipoli. The chaos of delivery of men and stores and the need to improve rapidly.
- **1915-1916:** The ammunition shortage and the need to step-up the manufacturing base to prepare for the Battle of the Somme.
- **1917:** How to cope with the new challenge of logistics 'on the move' after the German retreat to the Hindenberg Line; and the Canadian approach to overcoming the crisis of supply at Passchendaele.
- **1918:** The logistical and tactical points that the Germans got wrong in relation to their spring offensive; and what the allies got right in their advance to victory – highlighted by the seemingly innocuous availability of lifejackets for infantry crossing a key point of the St Quentin canal at Riqueval.
- **TRIBUTES:** A number of tribute and reflection items related to Rob, that are dotted throughout the publication.

● Digital publication edited and designed by Dr Martin Purdy. (March 2024)



Front cover: A female worker employed in the vital push to keep the BEF ahead of the enemy when it came to the production of war related materials. Above: Rob Thompson enjoying a copy of The WFA's flagship print publication Stand To!, to which he was a regular contributor.

IN March 2021 Rob Thompson was the guest on Dr Tom Thorpe's WFA podcast **Mentioned in Dispatches**. Entitled 'Logistics during the Messines-Third Ypres Campaign', (a theme visited in one of the articles in this publication), it is the opening conversation that is of most interest for the purposes of this introduction – providing, as it does, some insight into the passion that drove Rob and made him into the historian and compelling, approachable and often self-effacing individual that so many in The Western Front Association respected and admired. It also underlines his wonderful ability as a storyteller: to make the complex world of logistics understandable and the "boring and dull" (to use his own words) fascinating. That is a rare talent, and one that many struggle with. But then, as the excerpt below shows, Rob was not cut from standard cloth...

**Dr Tom Thorpe:** How did you become interested in the Great War?

**Rob Thompson:** I went to university as a mature student. I had no interest in the Great War or any wars, but I did a politics and history degree - and I was really interested in the politics. My interest was actually Italian politics, post-World War II. Anyway, I went for the history element because it gave me a solid background. Various modules I was taking did not run in the second year, so I got my fifth-choice module, which was '20th Century Military History'. My initial reaction was, 'Oh God, not the boys with the toys'. I went to the first seminar with Professor Martin Alexander. Brilliant bloke... anyway, he asked for a volunteer to do the first presentation on the First World War the following week, and I saw a lot of 19, 20-year-olds staring at their shoes. I thought:

## Introduction...

*'Well, you'll get cut the most 'slack' if you do this first, so I'll do it.' It was going to be straight forward - lions, donkeys, all that kind of thing - and I started reading Professor John Bourne's book 'Britain in the Great War' and it started to challenge just about everything. I got sucked in.*

**Tom:** So, we're going to talk about logistics today. Could you tell us what 'logistics' means?

**Rob:** Logistics is 'everything bar the shouting', which is all that is required to supply and maintain an army in the field... things like warehousing, ports, shipping; you know, what type of crane you've got, how good your roads are, what is the capacity of your railway? It's something much, much bigger than merely supply and transportation. It is everything required to move and maintain an army in the field - everything bar the shouting.

**Tom:** It is said that amateurs study tactics, war professionals study logistics. Is there any truth to this?

**Rob:** Swift answer to that, 'yes'. Professionals do talk logistics. Military history is littered with commanders who had no idea of what they were asking for in the 20th century - the era, if you like, of mass warfare and technology warfare. We see Hitler sweeping his hand across a map when looking at attacking Russia. I'm thinking, zero account of anything going on there: How do you move this? Where are the rail lines? What's the conditions in this part of the year or that part of the year? You may dream of bolting through to the Dardanelles, or driving up through Italy or defeating a

Montgomery in North Africa, but unless you've got the fuel and the trucks you're on a hiding to nothing. You can look at, for example, the German Spring Offensive. It is clear why this fails: because they simply took no notice of logistics whatsoever.

**Tom:** So why has there been so little academic study of this, especially during the First World War?

**Rob:** Because it's boring, it's very technical. When I look at a war diary from, say, a division of a brigade or a battalion of infantry, it's full of derring-do. If you look at the corresponding diary of the divisional assistant adjutant and quartermaster general, it's

talking about the fact that this part for a gun isn't particularly good, or it's talking about schedules of delivery. You know,

it's 'dull'. Does anybody think about how electricity arrives at their house when they flip the switch on? No. They want to watch the TV. They don't want to talk about or understand what goes on to produce those images.

Thank goodness for historians like Rob who have gone where most do not have the patience to go, and who are then capable of turning their findings into stimulating, thought-provoking discussion, presentation and prose. What follows is a collection of Rob's work that has appeared in the pages of The Western Front Association's publications – Bulletin and Stand To! - over the course of the past ten years. We could think of no finer tribute to the man than to let his own work speak for itself.

*Dr Martin Purdy*

**Note: You can listen to this and more podcasts on the website [here](#)**

## **MOBILIZATION OF THE BEF** by Rob

*AS the sun rose over the small village of Casteau, north of Mons, on the morning of Saturday, 22 August 1914 Corporal E. Thomas of No. 4 Troop, C Squadron, 4<sup>th</sup> Royal Irish Dragoon Guards levelled his rifle at a group of German cavalymen of the 4<sup>th</sup> Kurassiers, pulled the trigger and watched as one of the group dropped to the ground.<sup>(1)</sup> The sound of a bolt-action Short-Magazine Lee-Enfield (SMLE) Mk III .303 rifle chambering and discharging a round is unique and carries far, but it was not one that the Germans had expected to hear. If they expected anything they expected the sharp report of a French 8mm Lebel or perhaps a Belgian 7.65 mm Mauser, but a British Lee-Enfield? It could not possibly be, because according to General Alexander von Kluck's First Army intelligence reports the British were still mobilizing their troops far from the battlefield.*

*The German shock at the surprise appearance of the British Expeditionary Force at Mons is testament to the superb implementation of the BEF mobilization plan, a plan so well-executed that it attracted the unstinting praise of no lesser person than Kitchener, a man not known for effusive plaudits.<sup>(2)</sup> More importantly, the sudden and timely appearance of the BEF, played a significant part in delaying von Kluck's advance and the eventual German defeat at the September Battle of the Marne.<sup>(3)</sup>*

*Events after the Marne served to reveal Britain and the BEF's lack of preparedness for modern war in many different ways and the BEF spent 1915 and 1916 trying to make good its manifold deficiencies using the 'classic' British approach of 'muddling through', an approach described by historian Ian M. Brown as 'ad hocism'.<sup>(4)</sup> The efficiency of Britain's mobilization stands in stark contrast to this: it was a triumph of foresight, co-operation and administrative excellence involving the army, the government and civilian commerce and deserves study in its own right. This article examines the development of the BEF mobilization plan and its practical implementation...*

● 1st Cheshires march to embark in August 1914.

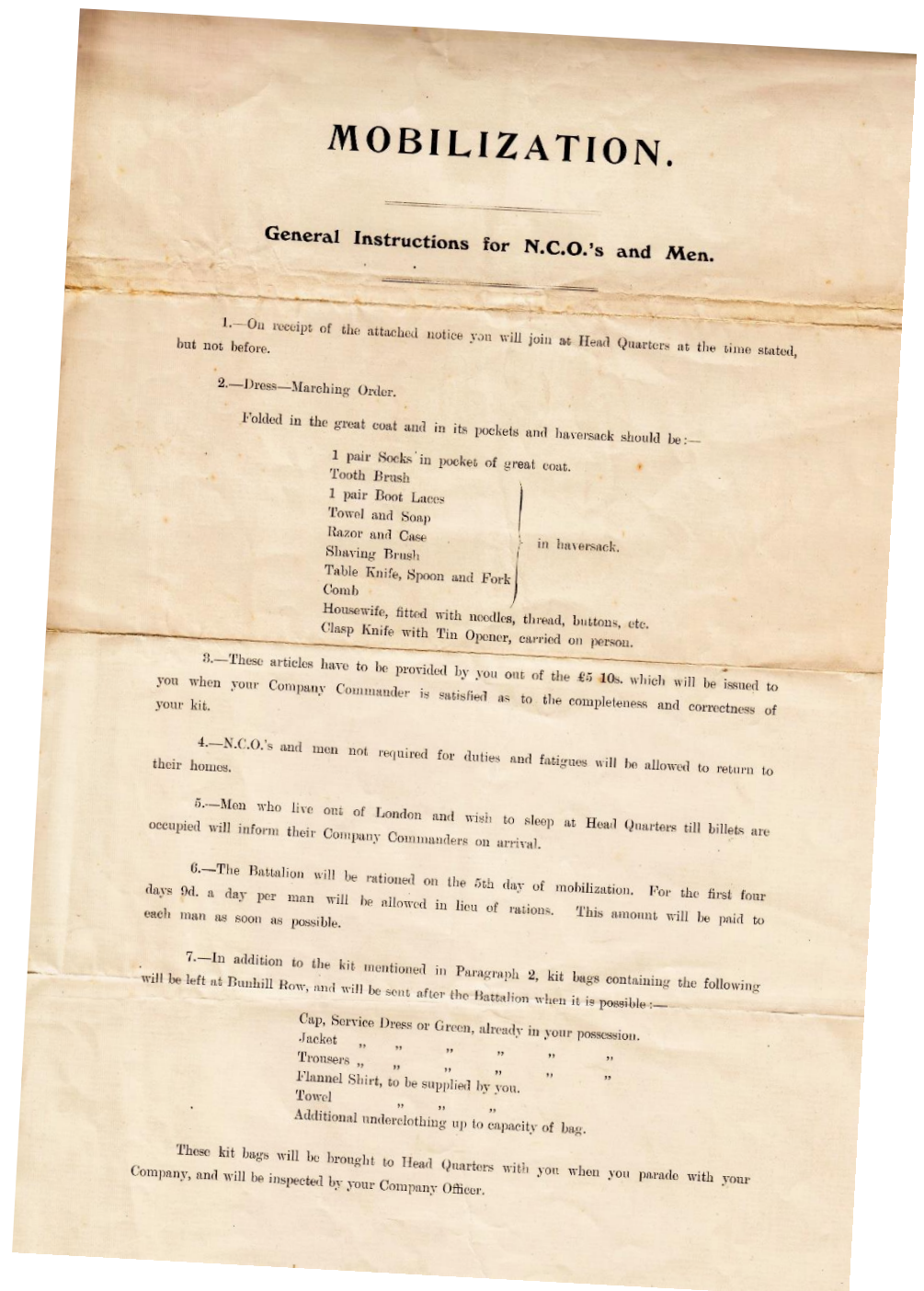


# 1914

DURING the first decade of the Twentieth Century there was a good deal of debate as to the potential nature of future warfare. Although military opinions within and between the major military powers ebbed and flowed the one element all agreed on was that he who attacked first and fastest would win the day. The success of this 'Cult of the Offensive' depended almost entirely upon the ability of nations to mobilize and get their troops into the field faster than the enemy, an ability made possible by the development of sophisticated, complex, mass-capacity railway systems during the late-Nineteenth Century.

Germany's mobilization system was developed after their successful use of railways during the 1870 Franco-Prussian War and rapid railway mobilization became an integral part of Germany's strategic attack scheme, the Schlieffen Plan. To enhance railway capability Germany effectively 'nationalised' its railways by imposing direct or indirect state control, creating a centralised administration, imposing 'standard operating procedures' and investing huge sums of money. Its development was dominated by a military that went so far as to require all German locomotives to have detachable tops so they could clear the low French bridges.<sup>(5)</sup>

France was equally aware of the military importance of its rail system and introduced a 'dual-control' arrangement whereby the railways remained in private hands and a shadow military organisation was formed. On the outbreak of war, the military took direct control of railways in



● **Detailed instructions as to what to take in relation to dress and general hygiene.**

the 'Army Zone', while the 'Interior Zone' remained in the hands of civilians. Like the Germans, the French invested heavily in 'military' track and infrastructure, nearly tripling the number of main lines running to the German frontier.

Even though Britain was equally aware of the importance of rapid mobilization, its position was

radically different to that of Germany and France. Britain's railway network was wholly privately-owned and its development driven solely by commercial considerations, the state and the military having no control or influence. While there was 'common practice' amongst the hundreds of fiercely independent railway companies this fell far short of the 'universal standard procedures' found on the Continent. British rolling stock, stations, platforms and loading bays, were developed exclusively to deal with commercial passengers and

freight, not soldiers and guns. In addition, although the 90,000-strong BEF was a much smaller force than the French and German 'million-man' conscript armies, its mobilization was a far more complex affair, requiring the use and coordination of more transport elements including the fragmented British rail system, sea transport from ports all around Britain, and French ports and railways to receive them and move them into the field.

These less than propitious circumstances suggest a BEF mobilization likely to descend into tragi-comic muddle and chaos but the reality was a masterpiece of smooth, rapid

The four basic elements of mobilization are *assembly* (of base depots, supplies, units, arms, equipment and reservists); *embarkation* (of troops onto trains and thence to the ports); *crossing* (assembling and organising ships) and *disembarkation* (at the French ports and concentration in the field) of which the first two will be dealt with.

The task of 'turn up, get on, cross over and get off' sounds simple enough but making this happen in practice was a phenomenally complex undertaking requiring forethought, excellent co-ordination, sound administration and obsessive attention to detail.

1912 consisting of representatives of the military, government and the ten major British railway companies created a forum that fully-incorporated the 'third leg' of Britain's mobilization system – the commercial railways.

More importantly it completed the means by which much closer practical understanding and co-operation could be achieved at the all-important technical level by bridging the gap between the military and private commercial worlds - the culmination of a process begun in 1896 with the formation of the War Railway Council [WRC].<sup>(9)</sup>



● ***The 5th Division staff who were faced with overcoming early logistical conundrums.***

efficiency that deposited the BEF in France extraordinarily quickly.<sup>(6)</sup> This apparent miracle was not achieved through any inspired flash of genius or radical overhaul of the system but through the mundane application of thought, foresight, planning, sound administration and the close co-operation of all concerned. As British railway expert Edwin A. Pratt noted, this remarkable achievement '... was no more than the practical outcomes of those peace-time preparations... on which so great an amount of labour had been spent in bygone years'.<sup>(7)</sup>

The administrative foundations upon which mobilization was built were developed in the aftermath of the Second Boer War and consisted of the Committee for Imperial Defence [CID] and the General Staff [GS], created in 1902 and 1903 respectively. These provided the basic planning 'machinery' and meant that for the first time '... the actions of the government and the army were made the subject of detailed, coherent and specific planning'.<sup>(8)</sup> The creation of the Railway Executive Committee [REC] in November

The functions of REC were to advise on railway matters; draw up and maintain a detailed scheme of movement based on War Office information; define the composition of trains based upon unit establishments; collate and transmit information to those requiring it and prepare regulations. To give effect to intent 'mobilization programmes' were required, and although the first timetables were drawn up as early as November 1904 it was not until 1909 that a level of trust and co-operation had been achieved sufficient for the

***'The administrative foundations upon which mobilization was built were developed in the aftermath of the Second Boer War.'***

companies to be satisfied that 'mobilization timetables proper' were achievable. The compilation task was the responsibility of the War Office and the REC. The War Office provided details as to exact unit composition; what start station they required; which day of mobilization and the desired time of arrival. The REC dealt with provision of rolling stock; times of passing stations and junctions enroute; compiling timetables; the making up and provision of complete trains and making sure these can run to schedule whenever needed.

To complicate matters even further, in 1911 district military commands were formed requiring a second tier of planning to fully co-ordinate the simultaneous mobilization required *within* command districts with that of the BEF passing *through* command districts. On top of this was the 'small' matter of mobilizing the entire navy whose needs had to be identified and interpolated into the programme.



The REC worked closely with numerous independent railway companies and a myriad of War Office and government departments and with so many fingers in the same pie the potential for confusion and chaos was enormous. The solution was the 'War Book'. The War Book was introduced in 1911 by Col. Maurice Hankey, Secretary of the CID, and represented the practical means by which the 'mobilization of the machinery of state was ordered and co-ordinated'.<sup>(10)</sup> It consisted of a continuously-updated single text with individual chapters detailing the actions taken by each agency upon mobilization together with a description of the reciprocal and concurrent action taken by other agencies. This simple act produced many benefits in terms

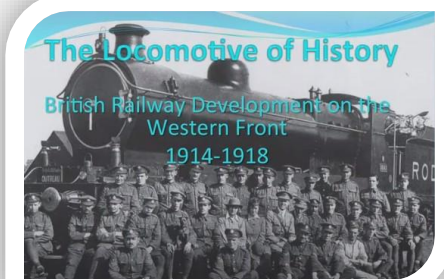


Railway Development in WW1 | Rob Thompson  
The Western Front Association  
9.4K views · 4 years ago

## Get on track with YouTube

**FUNDAMENTAL** to the success of war are the logistics of supply and movement, and in the Great War the '*prime lifters*' were railways. The Schlieffen Plan and Plan XVII were built around the railways as was Britain's mobilisation of the BEF. Railways also denied any quick and decisive victory by dint of the same virtues, leading to stalemate on the Western Front. 'Trenchlock' created the insatiable demand for the colossal amounts of "*more*" needed to both breakthrough and defend the lines and only railways could provide it. The static conditions created the stability and predictability needed for broad gauge and light railway systems on both sides to develop in size, complexity and importance thereby ensuring the maintenance of the siege for over three years. In early 1918 the railways allowed Germany to transfer troops from east to west for a series of powerful offensives that restored mobility to the battlefield, and during the spring and summer of 1918 railways allowed the Allies to strike back in a series of decisive operations designed to cut the enemy's railways in half and achieve victory.

● It is a fascinating topic, and one that you can find out a lot more about via a talk by Rob on The WFA YouTube channel. It's under 'playlists' and 'logistics' and you can access by clicking the link [here](#)



of achieving consistency of approach, reducing problems arising from 'compartmentalised' agencies and improving co-ordination - not least through a better understanding of how the actions of one agency related to another. On a very prosaic level it saved time as a single document required only a single authorising signature to set the wheels rolling rather than the normal procedure of multiple documents and multiple authorisations.

The mobilization programme also required two further elements: practical liaison between the army and the railway staff during

mobilization and an effective direct communication system. Practical railway-army co-operation was achieved through the forming of a military 'Railway Transport Service' with a definite chain of command that ended at the station with the Railway Transport Officer [RTO] who worked closely with his civilian counterpart, the Stationmaster. Although the RTO was of lowly rank his authority was supreme: all requests, commands and queries even when made by colonels and generals were dealt with through the RTO and his



● Unloading horses from the *Caledonia* at Le Havre for the 1<sup>st</sup> Battalion Cameronians was an ungainly affair (above, picture courtesy of Imperial War Museum) but did get marginally better as the conflict went on (below).





decision was always both absolute and final.<sup>(11)</sup>

Effective mobilization ultimately depends upon the ability to directly communicate, and this too was attended to, albeit belatedly. Wireless telegraphy was considered and rejected as being unreliable and insecure, but the major deciding factor was that the railway companies used telephones exclusively, so this became the default means of communication. To achieve this and maintain security an entirely new 'private' system of lines was laid by the Post Office thereby providing phone coverage from top to bottom. The system was completed only one week before the declaration of war.

Officially the order for mobilization was signed at 4pm on Tuesday, 4 August 1914, the following day being classed as 'Day One' of mobilization. The delicate diplomatic situation and the political ramifications of declaring mobilization saw a more nuanced approach taken by a government that had to simultaneously prepare for war without those preparations precipitating the conflict they were trying to avoid.

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On 29 July the 'Precautionary Period', a period of necessary activity prior to full mobilization, was quietly entered. On the night of 2 August and throughout 3 August the Territorials, on their annual summer camp were recalled and trains successfully organised to collect them despite the fact this situation was not foreseen or planned for. On 'Day One' (5 August) the district military commands were mobilized, but not the BEF, whose mobilization was sanctioned on 6 August but delayed for a further three days due to the political

situation. On 7 August advanced parties of the BEF began to move to France and on 9 August the BEF mobilized.

The actual mobilization of the BEF began as planned on 9 August with concentration in France completed by 19 August. This timeframe does, however, create the false impression that 'mobilization' only took 10 days or so from start to finish. In fact there were two consecutive phases of mobilization: military commands, which dealt with horses and reservists in their area destined for the BEF, and the movement of the BEF 'proper', complete with its full complement of formed units.<sup>(12)</sup> Planned to occur concurrently, the decision to delay BEF mobilization until August 9 created an unintended 'two-stage mobilization'. It is possible to argue this was a boon,

*'Most of the horses needed by the BEF were in private hands and would have to be rapidly requisitioned upon mobilization, but no real provision was made for this.'*

allowing extra time to collect the individual reservists and horses required or that it was a hindrance that disrupted the timetable. Interestingly the army had calculated that it required 15 days to get the BEF ready for action and that is how long it took from the declaration of August 4 to the concentration of the BEF in France, 19-20 August.<sup>(13)</sup>

The initial 1906 plan for mobilizing reservists was to inform their depot, which in turn would *post* the reservist their instruction to return to depot along with a rail travel warrant and a Post Office Order to cover their subsistence costs while en route, a process that would take weeks.<sup>(14)</sup> This clearly unacceptable situation was solved by the simple but very

effective measure of permanently attaching a rail warrant and PO Order to the reservist's identity card and the use of pre-prepared telegrams to notify the reservist directly. The reservist then journeyed independently to their designated depot, whereupon special trains were used to move the reservists to the location of their regiment.

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Horses were another problem, and it was only thanks to pre-1914 reforms driven by the QMG, General Sir John Cowans, and implemented just in time, that the BEF managed to get the horses it needed - as the original organisation could not have provided more than 10 per cent of the required number. Most of the horses needed by the BEF were in private hands and would

have to be rapidly requisitioned upon mobilization, but no real provision was made for this. Between 1912 and April 1914 Cowans organised the legal framework and set up a system whereby Remount Officers could

monitor horses in their area in conjunction with an ongoing national census. Upon mobilization 'duly authorised persons' collected the required horses in their area and these were taken to designated entraining stations for movement by pre-prepared special trains.

On Monday, 10 August at 08:15 the first BEF train arrived 30 minutes early at Southampton Docks. This was the start of a nationwide tsunami of men, animals, guns, supplies and equipment all heading for France. It is often forgotten that the mobilization programme included reinforcements and further stores that were dispatched up until 31 August. During this period the total amount sent amounted to

118,454 personnel, 37,649 horses, 5,221 vehicles and 4,557 tons of baggage and stores. The peak traffic day at Southampton (21-22 August) saw nearly 17,000 troops and 4,583 horses processed. On the five greatest days of activity over 1,800 special trains were run with 13 ships per day leaving their berths. These are very impressive figures, even more impressive when one realises that these represent the movement of complete units that could move under their own power once in France rather than just component parts yet to be 'sorted'.



The primary consideration when moving the units was not capacity to send, but Southampton's capacity to receive. This meant that all schedules were worked out backwards from the dock gates requiring spectacularly efficient turnaround times at the docks to avoid congestion. On average a train arrived at the dock gates every twelve minutes and was directed to within 150 yards of the ship berth down special lines called 'Gullet Roads' and completely unloaded and turned around in only 40 minutes. Even as the empty train left another elaborate set of arrangements was initiated to make certain that 'empty mileage' was minimised.

Southampton was only one of five ports that were used for mobilization of which three were of vital importance for handling supplies and specialised equipment: Avonmouth (Motor Transport and petrol), Newhaven

(stores and supplies), and Liverpool (MT and frozen meat). Without the mobilization of supplies, no modern army can function and this added another complex layer of timetables and co-operation. It also highlights one of the less 'orthodox' elements of the mobilization, one that was most definitely not contained in the 'War Book'.

The man most directly responsible for the maintenance and movement of supplies was General Long of the Army Service Corps [ASC]. Long was a brilliant but irascible and independent man who was concerned that supplies of sugar might 'disappear' due to sharp practice by the sugar companies looking to increase profit as they did during the Boer War. Upon the outbreak of war the War Office Contracts Branch ascertained how much sugar could be supplied.

The answer was pitifully small unless excessive prices were paid. Long refused these prices and instead identified the location of all sugar stores in the country and sent troops to guard the gates, threatening to seize the sugar if necessary. The sugar 'barons' caved in. Of course Long's actions were entirely illegal but now that he had acted Parliament had no choice but to pass emergency legislation in less than 24 hours to retrospectively sanction his actions.

The last of the BEF unit trains arrived on Sunday, 17 August at 17:38, 22 minutes early. Five days later the first shots at Mons were fired by complete units of the BEF.

This astonishing achievement was completed without fuss, frenzy or chaos, despite the potential inherent in the British system. Nor was it achieved through any kind of enormous government effort or state-sanctioned centralisation as was the case with Germany and France. It was achieved through the simple but effective application of foresight, thought, planning, rehearsal and co-operation.

As such it proves the supreme importance in war of what the modern US and British military trainers and educators now call 'The 7 Ps' - 'Proper Planning and Preparation Prevent Piss-Poor Performance'.

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#### Notes

- (1) Beadle, J & Harrison, I, 'Firsts, Lasts and Onlys: Military', (London, 2007), p. 93; The Long, Long Trail: The British Army in the Great War of 1914-1918, 'The Battle of Mons', <http://www.1914-1918.net/bat1.htm> Accessed, 02/06/14.
- (2) Pratt, EA, 'British Railways and the Great War: Organisation, Efforts, Difficulties and Achievements' Vol. I, (London, 1921), p. 114.
- (3) That the BEF at Mons caused a delay so crucial that it ultimately 'saved France' is very doubtful. What it did do was interrupt First Army's advance thereby making a significant contribution to the cumulative delay plaguing von Kluck's First Army. In turn this forced von Kluck to abandon the encirclement of Paris, perhaps the most crucial element of the Schlieffen Plan, leading to the halting of the German advance at the Marne.
- (4) Brown IM, 'British Logistics on the Western Front, 1914-1919', (London, 1998), p. 233.
- (5) Wolmar, C, 'Engines of War: How Wars Were Won and Lost on the Railways', (London, 2010), p. 132-133.
- (6) 'Day One' of BEF mobilization was 5 August. The vast majority of the BEF were disembarked in France by 14 August and concentrated in the Le Cateau area by 20 August. Source: Bourne, J, 'Britain and the Great War, 1914-1918', (London, 1989), pp. 17-18.
- (7) Pratt, EA, 'British Railways and the Great War: Organisation, Efforts, Difficulties and Achievements' Vol. I, (London, 1921), p. 114.
- (8) Bourne, J, 'Britain and the Great War, 1914-1918', (London, 1989), p. 16.
- (9) The antecedent of the 1912 Railway Executive Committee was the Army Railway Council created in 1886 before becoming the 'War Railway Council' in 1903.
- (10) Bourne, J, 'Britain and the Great War, 1914-1918', (London, 1989), p. 16.
- (11) Pratt, EA, 'British Railways and the Great War: Organisation, Efforts, Difficulties and Achievements' Vol. I, (London, 1921), p. 27-29.
- (12) Territorials were mobilized not necessarily for inclusion in the BEF, but to take over some of the duties of regulars destined for the BEF and to guard mobilization routes and key depots. While maintaining home security was clearly important, the fighting ability of the BEF did not depend upon territorials, but it did depend upon having the requisite numbers of reservists and horses.
- (13) The period 4-19 August constitutes 15 days.
- (14) Chapman-Huston & Rutter, 'General Sir John Cowans: The Quartermaster-General of the Great War', Vol. I, (London, 1924), p. 267.

*'On average a train arrived at the dock gates every twelve minutes and was directed to within 150 yards of the ship berth down special lines called 'Gullet Roads' and completely unloaded and turned around in only 40 minutes.'*

# THE TRANSITION TO TOTAL WAR by Rob

**REMEMBER SCARBOROUGH!**



**ENLIST NOW**

**MEN OF BRITAIN!  
WILL YOU STAND THIS?**



*No 2 Wykeham Street, SCARBOROUGH after the German bombardment on Decr 16<sup>th</sup>. It was the home of a Working Man. Four People were killed in this House including the Wife, aged 58, and Two Children, the youngest aged 5.*

**78 Women & Children were killed and 228 Women & Children were wounded by the German Raiders**

**ENLIST NOW**

**REMEMBER Scarbor'o'** was a slogan coined at the beginning of the war – one that reflected public shock and outrage at the German naval bombardment of this peaceful seaside resort on 16 December, 1914.

It was a phrase that predated the shift in warfare (known in military circles as an RMA or 'Revolution in Military Affairs') that would occur between 1914 and 1918...

As a tactic of warfare, the East Coast raids reflected a nineteenth century concept of warfare that stressed and reflected factors such as élan; musketry skills; the 'shock' of the cavalry charge; la guerre à outrance; the 'cult of the offensive' and achieving 'the decision'. (The raids had been an attempt to draw out the Royal

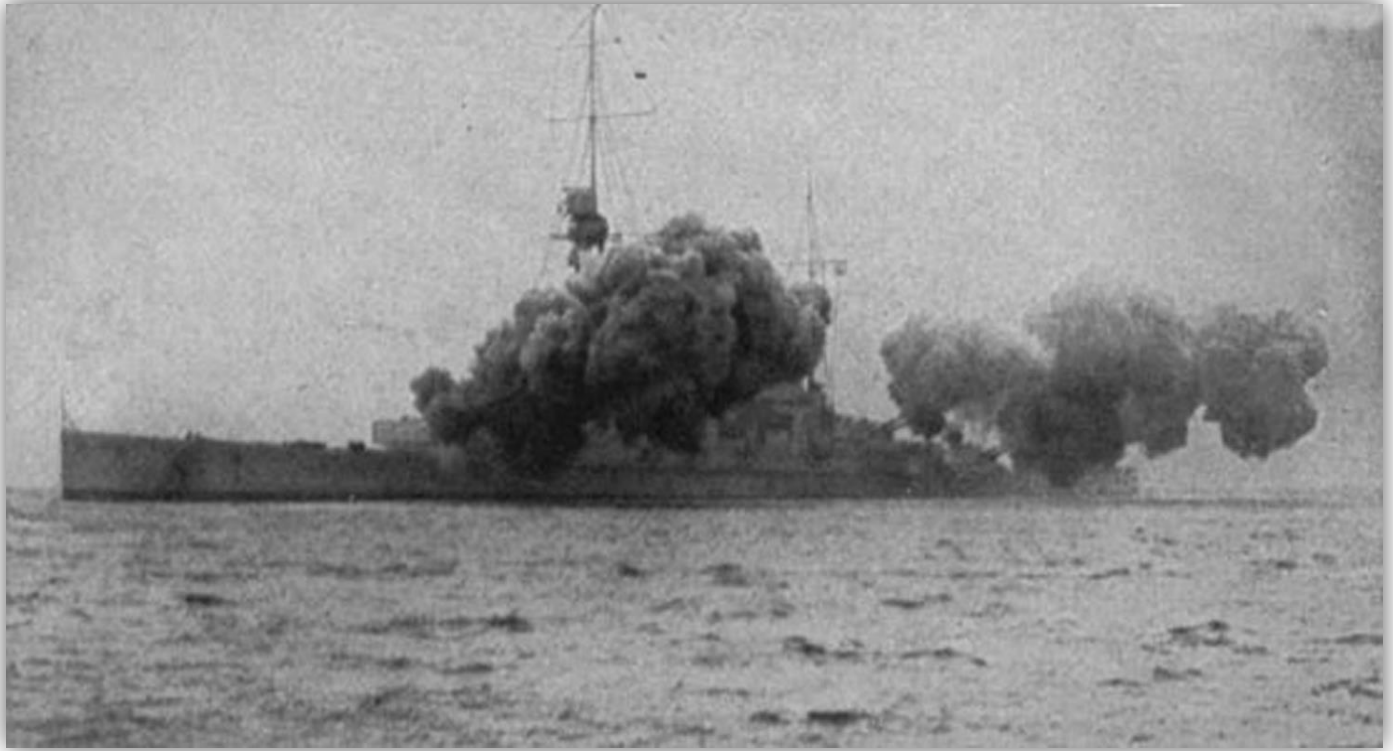
Navy on terms favourable to the German Kaiserliche Marine - Imperial German Navy - and defeat them in a decisive naval engagement.)

Within less than a year, the slogans associated with the raids would be replaced by others such as 'Feed the Guns', which represented the move to address

# 1914

the mass, industrialised, production-orientated, statistically measured, technologically driven, firepower-centred attritional slog that the war had become.

Like the Old Contemptibles at the Marne and First Ypres, the Scarborough raid had been another 'Last Hurrah' of a fading Edwardian Summer – one that was to be rapidly replaced by U-boats, mines, torpedoes, blockades and convoy duty complementing and sustaining the attritional grind of trenches,



wire, routine and the ceaseless roar of the voracious guns. Taken together, the slogans 'Remember Scarborough' and 'Feed the Guns' represent the transition from the limited wars of the nineteenth-century to the Total Wars of the twentieth - and just as the failure to achieve a land decision in 1914 had profound but unforeseen consequences, so would the Scarborough raid.

### **What is Total War?**

The phrase was coined by the ex-Commander-in-Chief of the German Army Erich Ludendorff in his 1935 book *Der totale Krieg*, though the idea dates back to the French Revolution - and he borrowed liberally from others too. When he wrote 'total war is not only aimed against the armed forces, but also directly against the people', he touched on the essence of Total War: the extension of warfare to include

● *SMS Derfflinger launches a salvo from its powerful guns. These, which were used at the attack on the East Coast, could fire a 550-893 lbs shell a distance of 25 miles at over three times the speed of sound.*

the people. Historian Hugh Bicheno provides a more succinct definition: 'Total War is one in which the whole population and all the resources of the combatants are committed to complete victory and thus become military targets'. The key elements contained within this broad definition are:

- *Typically national in character involving entire population*
- *Distinction between 'combatant' and 'non-combatant' blurred or removed entirely*
- *Science and industry mobilised by the state on national scale to maximise war material output*
- *Actions often militarily unrestrained*
- *Battles indecisive and outcome decided by attrition over time*

- *Suspension of social, political and legal 'norms'*
- *Mass armies of citizen-soldiers*
- *Strong ideological element to justify mass participation*
- *Demand for unconditional surrender*
- *'Capitulation' not an option*
- *The mobilisation of entire nation and resources for pursuit of victory*

### **Combatants, Non-Combatants, Ideology, Recruiting**

The Scarborough attack and the introduction of unrestricted U-boat warfare were closely linked but also important in terms of defining combatant status and ideology, which are both key elements in Total War. Part of the rationale underpinning the path to unrestricted U-boat warfare was the Royal Navy's blockade of Germany instituted upon the outbreak of war, the severity increasing incrementally between August and November. Aimed initially at the seizure of

**'Part of the rationale underpinning the path to unrestricted U-boat warfare was the Royal Navy's blockade of Germany.'**

warlike materials destined for German ports, by December 1914 the legal definitions of 'blockade', 'contraband' and 'ultimate destination' had been stretched to breaking point. In practice the navy could stop any neutral ship wherever bound and seize material (including foodstuffs) if it suspected the ship or its cargo were ultimately destined for Germany, irrespective of the stated destination port. Apart from 'justifying' Germany's naval actions and decisions the blockade also antagonised neutral nations, most especially the USA whose financial, agricultural and industrial support were vital to the Allies if they were to win the war.

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The USA took the position that neutrals have a right to engage in free trade of civilian supplies without interference from belligerents. This was enshrined in the US-sponsored 1909 Declaration of London which was signed, but not ratified, by Britain. In the event this latter excuse was not relied on and Britain trod carefully, only increasing the scope of the blockade in response to German actions such as the laying of mines. This mollified the US Government (at least to a certain degree) but there was still an undercurrent of resentment. Furthermore, by December 1914 the British blockade was to all intents and purposes indiscriminate and hurt the non-combatant civilian population far worse than the military - giving at least some credence to Germany's claim that the blockade was not just illegal but immoral, thereby justifying their own policies. However, any resentment the Americans felt about the blockade paled into insignificance compared with the



● **No.2 Wykeham Street, Scarborough, became the focal point for much of the subsequent propaganda.**

increasing shock and outrage directed at Germany's actions, and the attack on Scarborough was an integral part of this.

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Perhaps the most immediate shock of the East Coast raid was the number of non-combatants, especially women and children, killed or injured. In the case of Hartlepool, the Germans could claim what we would call today 'collateral' casualties, suffered because of their proximity to legitimate military targets. At Hartlepool the German guns represented the latest in

sophisticated, accurate firepower, but the limits of this meant that although the gasworks, harbour, steelworks and railways (arguably legitimate targets) were hit so were churches and houses. The non-combatant civilian casualty toll far outweighed that of combatants. Technology had provided the ability to engage in 'stand-off' military engagements directly against an enemy nation rather than just its military. The sophisticated industrial production systems required to sustain peace were now also that



which sustained war: the local gas and steel works were as capable of producing ploughshares as they were swords. These two factors alone inevitably blurred the distinction between combatant and non-combatant. At Scarborough, a popular seaside resort containing no legitimate military targets (despite Germany's risible claims to the contrary) there were no such mitigating circumstances. The civilian population, an inviolate target protected by international laws that all parties were bound by, was attacked directly. This foreshadowed what was to come: when the entire nation is at war the entire nation acquires combatant status.

Even though the process had begun the entire nation was not at war when the German guns opened fire on Scarborough and its non-military status meant there was no issue of collateral casualties to debate: this was a straightforward atrocity and was perceived as such by a British public appalled at such barbarity.

Today the Great War is often seen in terms of self-serving Great-Power-politics but it did have a powerful ideological component: civilised liberalism and freedom versus barbarous German militarism and 'kultur'. This perspective gained increasing credibility through

*'Scarborough became one of the 'strong ideological' elements justifying mass participation in the conflict.'*

Germany's declaration of war; its violation of Belgian neutrality; the burning of the Louvain library and the execution of Belgian civilians suspected of being, harbouring or aiding 'Francs Tireurs' amongst many other real and imagined atrocities. The Scarborough raid did not happen 'over there', an abstract event viewed from the distant comfort of the British Isles: it was a shockingly real and immediate example of German 'frightfulness', and it could just as easily happen to you. If there

was any lingering doubt of the 'rightness' of Britain's cause the merciless brutality of the Scarborough raid dispelled it.

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Scarborough became one of the 'strong ideological' elements justifying mass participation in the conflict, and in the face of such barbarity capitulation was not an option.

The most immediate effect was on voluntary recruiting. The Parliamentary Recruiting Committee moved quickly and produced a series of posters of which perhaps the most powerful and direct was a poster showing a motherless child with a baby in her arms outside of a destroyed No. 2 Wykeham Street; the number of women and children killed and injured there and the defiantly challenging slogan *Men of Britain! Will You Stand This?* (In a tragically ironic twist the 'hero' of No. 2 Wykeham Street, Christopher Bennett, who saw his family massacred himself became a victim of the coming 'Total War' when he joined the Royal Artillery and was killed in France

● *The naval attack on Scarborough generated headlines around the world (facing page), and two of the most famous slogans of the war in tandem (right) as part of a Munitions War Bond drive in Scarborough in 1918 (picture courtesy of Scarborough Maritime Heritage Centre).*



on 21 January, 1917.) Other posters began to use the words *Remember Scarborough*, a rallying cry which stuck. Although there is much anecdotal evidence of a significant increase in voluntary recruiting both locally and nationally Government figures suggest this was minimal and transitory. Its longer-term effect should be understood more in terms of 'recruitment to the cause' rather than the 'colours'. This arguably helped frame discussion about compulsory military service in 1915 (anathematic to liberal Britain but crucial for the prosecution of Total War) and ease the introduction of the Military Service Act in early-1916.

### World opinion

Although difficult to quantify it is probable that the greater effect was on world opinion, especially that of the USA as evidenced by the width and depth of newspaper coverage - aided in no small measure by Britain's extensive control of newspapers press agencies and media technology. Nevertheless, the

coverage in the USA from the major national to the smallest local paper was nothing short of astonishing, as was the speed of coverage, the majority of US papers running it as a front-page headline in the evening editions of 16 December. The 'acid test' of the importance of a press story is not just the width of coverage but the depth: if they are reading it in the 'Bible Belt' as well as the Eastern Seaboard then the story has 'penetration'.

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Furthermore, the raid was continually discussed and referenced after the event. In the United States this story, in concert with previous German 'atrocities' stories was a significant factor in furthering the impression of a 'barbaric' Germany and allowed journalists to argue the case for US support of 'freedom-loving, liberal Britain'. And outrage was not confined to English-speaking America. In Italy, national editions such as *La Stampa* and *Corriere della Sera* both described the Germans as 'baby-killers'. Italian liberals and socialists

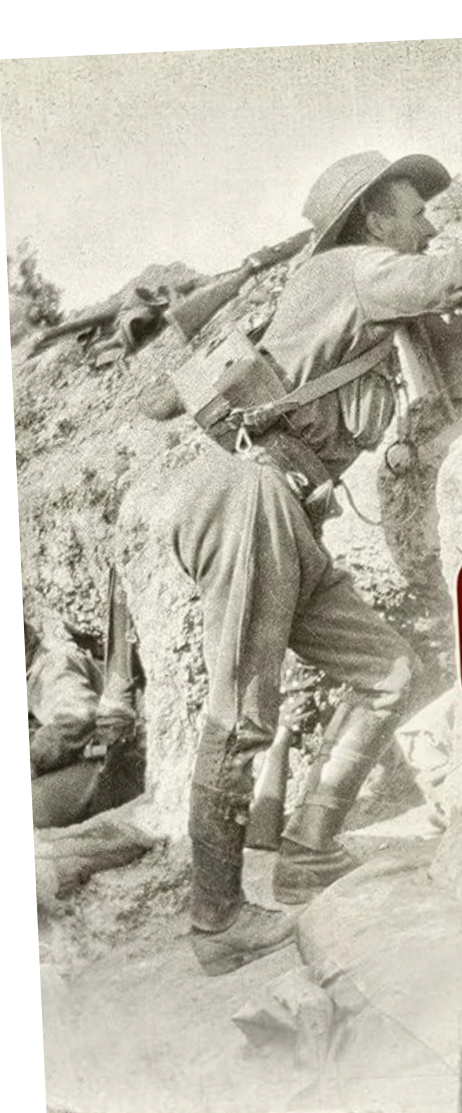
pressed harder for Italy to enter the fray on the side of the Allies.

Scarborough was not the direct cause of America's change of position or its eventual entry into the war, nor was it Italy's 'final straw', but by stirring emotions, generating debate, defining moral and ethical positions, directing opinion, deflecting criticism and hardening attitudes its effect was indirect but profound. Above all it introduced the appalling reality of this war and what it would rapidly become. The need to 'Feed the guns' and the impact that would have on all walks of life, particularly women, cannot be understated.

**Note:** When this article was first supplied to *The WFA* some years ago it included 32 references which were excluded due to space limitations, and which have sadly been lost to posterity.



Watch a Rob talk on the move to total war [here](#)



# TWO SIDES OF THE SAME BAD PENNY?

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## GALLIPOLI AND THE WESTERN FRONT A COMPARISON

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EDITED BY  
**MICHAEL LOCICERO**





## GALLIPOLI VERSUS THE WEST... by Rob

**Over three days in September 2015, The Western Front Association hosted a conference to mark the centenary of events at Gallipoli and on the Western Front. Papers were delivered by leading historians, including Rob Thompson, and a compendium subsequently published by Helion Books under the title of *'Two Sides Of The Same Bad Penny?'*. What follows is an extract of Rob's contribution on logistics in 1915. If you want to read his full paper, as well as many more on a wide range of themes, then the book (left) will make a great addition to any serious reference library...**

**"The interconnectedness of all things": Supplying the British Army at Gallipoli and on the Western Front...**

At midday on 24 April, 1915, Company Commander Captain Herbert Flemming of the 9th Battalion, London Regiment (Queen Victoria Rifles) was overheard by Private Anthony Hossack talking urgently with his adjutant. Hossack only caught three words: "Things are critical."

<sup>(1)</sup> The occasion of this grim assessment was the German gas attack on the Ypres sector that ripped a four-mile hole in the line through which waves of German infantry, well-supported by artillery, surged. A pitiful handful of British and Canadian troops tried to seal the breach and re-take the key villages of Gravenstafel and St Julien. The savage fighting that followed reflected the gravity of the situation, for an enemy advance past Ypres constituted an Allied strategic catastrophe as Hossack's orders made clear: "This line must be held at all costs. Our next is the English Channel".

The defenders counterattacks were critically compromised by

# 1915

paltry artillery support as Hossack noted in his diary: "We pass a field battery; it is not firing, as it has nothing to fire, and its commander sits weeping on the trail of one of his useless guns."

Luckily for the Allies the Germans planned a series of step-by-step operations designed to reduce the salient rather than a breakthrough and lacked the necessary reserves to take advantage. Had they possessed reserves it is likely 1915 would have seen a German victory over France and the strategic nightmare of a foreign dominated English Channel. Instead, the fighting went on for another 30 days with the British substituting flesh and courage for absent artillery fire resulting in a perilously reduced salient and a casualty list of nearly 60,000. <sup>(2)</sup>

As Hossack passed the weeping gunner, 1,350 miles away at Mudros harbour, on the island of

Lemnos, four divisions of the British Army under General Sir Ian Hamilton were weighing anchor to make the 75-mile journey to Helles on the southern end of the Gallipoli Peninsula. <sup>(3)</sup> The purpose of this attack against the Turks was to secure the Dardanelles Narrows, allowing the Royal Navy to open-up a sea passage to Russia and possibly knock Turkey out of the war. After gaining a precarious toehold at Helles Hamilton renewed his attack again on 6 May. <sup>(4)</sup> Although reinforced by the arrival of the 42nd (1st East Lancashire) Territorial Division Hamilton's troops failed in their objective, principally because of a dire lack of guns and, above all, shells.

Almost concurrently on the Western Front the BEF launched an attack at Aubers Ridge in support of the French. <sup>(5)</sup> The attack was a costly disaster due mainly to insufficient artillery and shells. On the same day (9 May) BEF Commander-in-Chief, Sir John French received a demand from the Secretary of State for the immediate transfer of 20,000 rounds of 18 pounder and 2,000 rounds of 4.5' howitzer shells to Gallipoli.

French protested - unsurprising since the entire stock of 4.5' howitzer shells on the Western Front amounted to a risible 3,600 rounds - but had no choice but to acquiesce. (6) When the BEF resumed its offensive on 15 May at Festubert it had no 4.5' howitzer ammunition and was thus deprived of its only effective field artillery and the attack failed at high cost. (7)

On 6 August Hamilton, now with 11 divisions, (8) attempted to break the deadlock at Helles with a major landing at Suvla Bay. Once again the offensive failed, as did the BEF offensive at Loos in September, both due to lack of guns and ammunition. (9) The onset of winter saw a complete evacuation of Gallipoli whilst the BEF licked its wounds, husbanding forces for 1916.



### Westerners, Easterners and the Shell Crisis

At first sight it appears astonishing that Britain, facing imminent strategic disaster a mere 75 miles away on the main front against the main enemy and fielding an inadequate and inadequately equipped force, was diverting scarce men, guns and shells to what amounts to a faraway, ill-defined 'adventure', the uncertain purpose of which was to mount an imperial display of power - cow the Turks into surrender and open up a supply route to receive Russian wheat Britain did not need and send Russia matériel Great Britain did not possess.

This of course speaks to the 'westerners' versus 'easterners' strategic debate: whether to pursue the cardinal military principle of attacking the 'main enemy on the main front' in France and Flanders or to attack Germany's allies, thereby

'knocking the props from under Germany'. (10) This particular debate has rumbled on for a century with 'westerners' currently in the ascendancy, at least amongst military academics. It is said that generals 'merchant in theories' and that logisticians 'deal in facts', with war being 'very much a fact'. (11)

These logistical 'facts' do not so much 'speak' as shout volubly, if ineffectually, at a dominating but mostly theoretical debate that ignores the harsh reality of the role of logistics in modern warfare. That 'fact' is mostly aptly illuminated by the so-called 'Shell Scandal' that erupted between March and May 1915, popularly polemicized by *The Times* correspondent Colonel

**“The war was fought throughout and ultimately won, not only by the usual military weapons in the narrower sense, but by the whole economic, industrial, and financial systems of the belligerent Powers.”**

Repington but more ably articulated by the hard-pressed BEF Commander-in-Chief [C-in-C] Sir John French: “The output of ammunition was so comparatively meagre that it was not sufficient for France, and of necessity offensive operations in both theatres were starved.” (12) Therein the rub lies: Britain in 1915 lacked the productive capability to supply the requisite number and type of shells required for this war whether on one front, two fronts or twenty. In this respect the 'zero-sum' argument articulated by French and Haig that shells for Gallipoli during the spring and summer of 1915 essentially denuded the Western Front is no more than a

statement of the obvious. (13) The argument that diverting scarce shells to Gallipoli critically compromised operations on the Western Front is harder to sustain and it is unlikely that an extra 24-per-cent of shells could have transformed Neuve Chapelle, Ypres, Aubers Ridge or Loos into great victories. (14)

There was first, an absolute lack of High Explosive (HE) shells; second, a dearth of medium and large calibre (4.5' to 9.2') shells; thirdly, few artillery pieces to fire them and finally, hardly any howitzers - the only artillery capable of firing shells at a high enough angle to effectively engage defensive positions at Helles or the Hohenzollern Redoubt.



### A Mass Industrial War

Once we move beyond the absolute shortage of shells and suitable artillery a more nuanced and important historical issue comes to the fore, and that is the question of to what extent do the two campaigns inform each other? What do the two campaigns tell us about divergence and convergence of military thought and practice despite their apparent differences? An examination of this through the imperative lens of logistics reveals much...

Napoleon once noted the threefold primacy of the 'moral' over the 'matériel', but a century later there was “no proportion between the two. It is only material results that have a moral effect today”. (15) This was a global, industrial war of matériel defined by the processes and products of industrial mass society organised and applied in the most efficient and effective way possible. The 'warrior-

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philosopher' and father of holistic general systems thinking, General Jan Smuts, articulated this fundamental change when he wrote: "The war was fought throughout and ultimately won, not only by the usual military weapons in the narrower sense, but by the whole economic, industrial, and financial systems of the belligerent Powers. Food, shipping, metals and raw materials, credit, transport, industries and factories of all kinds played just as important a part as guns, rifles, aeroplanes, tanks, explosives and gas, warships and submarines." (16)

It was a war of mass supply and movement; a war of local, regional and global integrated, interdependent systems and systems of systems dominated by administration and management: a war of modern logistics. 'Modern' in this sense refers to the application of 'scientific management', an empirical method developed by American Frederick Taylor of the Midvale Steel Company in the late nineteenth century. Its aim was to pursue more economically effective production and distribution through the use of analytical methods, synchronisation of processes, rational logic and the standardisation of elements and practices. It was the driving force behind the great civilian engineering, manufacturing and transport industries that constituted early twentieth century mass industrial society. It was also a virtually alien concept

within a British military establishment that had little interest in administration and which regarded civilian experts and methods with hostile suspicion.

In modern industrial terms the military were still of the 'craft production' mindset and this made it difficult for them to deal with the logistical implications and imperatives of mass, industrialised warfare. This does not mean that the British Army in 1915 was hopelessly mired in a pre-industrial 'cavalry and cold steel' ethos that rejected technologies such as machine guns, quick-fire artillery or motor transport. Rather it is indicative of a small, professional force developed and designed to deal with a form of colonial campaigning that embraced new technologies enthusiastically but did not require wholesale recourse to civilian-inspired scientific management techniques. The British military believed, entirely reasonably, that such techniques were appropriate in a stable and peaceful mass, civil society but had limited application to the business of supply in the tumultuous arena of war.

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### Supply Chains

At the heart of any military supply system is the supply chain, essentially a system encompassing individuals, organisations and structures

designed to deliver products from supplier to end-user. Military supply chains can be long, short, straightforward, convoluted, simple or complex and involve many different types of storage, transport and transshipment procedures by land or sea depending upon circumstance. All have the same basic structure consisting of three fundamental main links: home port to base port; base port to operational area and operational area to forward area. The first two are referred to generally as the 'Line of Communication' [LoC], though strictly speaking the LoC runs from the base port rather than home port, while the latter is known as the 'Forward Supply Area' and is generally analogous to the area of military operations.

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### BEF Supply Chain

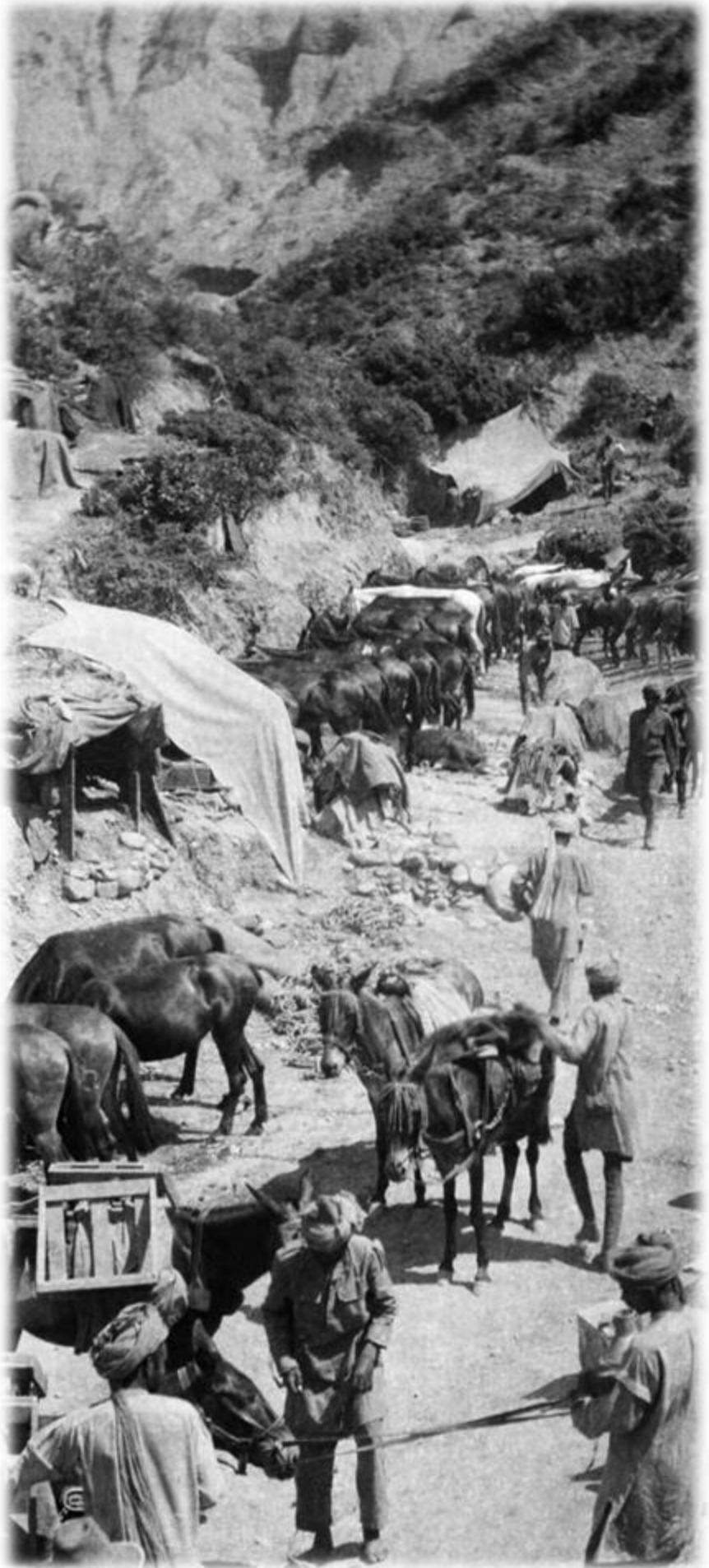
The British Expeditionary Force supply system was the most modern and flexible military supply chain in the world having been updated in 1912 with the definite interpolation of motor transport [MT] into the chain. Supplies moved from various British ports to the French 'Base Ports' of Boulogne, Le Havre and Rouen with Calais added to the list in May 1915. Supplies were unloaded at the dockside and moved into transit sheds where they were bulk loaded onto railways. Supplies were then moved to an 'Advanced Base' and then on to 'Regulating Stations'. Advanced bases contained main supply depots, bakeries, ordnance depots, hospitals and many other installations from which the needs of the field forces were met. Although a distinct administrative and physical entity, advanced bases were

**"The British Expeditionary Force supply system was the most modern and flexible military supply chain in the world having been updated in 1912 with the introduction of motor transport into the chain."**

“Motor transport moved forward and dumped their loads at a ‘Refilling Point’, a convenient place that in 1915 was often no more than a road junction.”

more often than not co-located at the base port. Regulating stations were huge marshalling yards where supply trains were made up. Munitions, ordnance, engineering material and other specialist supplies were dealt with separately and there were also various depots placed on the LoC to act as a reserve should the LoC break down. From this point trains moved supplies forward to the ‘Railhead’, a site deemed the nearest point to the front that trains could move to without being subject to enemy action, representing the juncture between the LoC and the Forward Area.

Prior to 1912 supplies were transshipped from railhead to horse-drawn general service wagons which had a useful supply radius of approximately seven miles. The insertion of MT between railhead and Horse Transport [HT] increased this radius by up to 30 miles and was consistent with the British concept of a highly-mobile and flexible military force able to operate at distance from the railhead. From the railhead MT moved forward and dumped their loads at a ‘Refilling Point’, a convenient place (in 1915 often no more than a road junction) selected by the formation commander that was being supplied. (17) From that point HT moved supplies forward a distance of about 3-6 miles with the long-suffering ‘Poor Bloody Infantry’ providing the muscle-power covering the last mile or so to the front lines.



● *Reliance on horses and mules for the movement of stores at Gallipoli remained high throughout the campaign.*



● ***Now and then photos of Gully Ravine at Helles: it is as inhospitable to the modern traveller (above) as to the troops landing stores and troops in 1915 (inset).***



### **MEF Supply Chain**

The Mediterranean Expeditionary Force supply chain was a very different beast, if not in concept, then certainly in detail. At 3,500 miles and involving a five or six week journey it was far longer and virtually all seaborne bar the short journey from beachhead to the forward positions. General Ian Hamilton described it as ‘The most difficult Line of Communication the world has probably seen since the day of Xerxes’ .<sup>(18)</sup> Given that Xerxes had the option of foraging for food and materials while replenishing his weapons from captured stocks, Hamilton was perhaps understating the position. Using mainly the ports of Avonmouth and Devonport supply ships generally travelled via Gibraltar

and Malta before finally docking at the base port of Alexandria. Alexandria was still over 700 miles from Gallipoli but the presence of enemy submarines precluded direct offshore unloading at Gallipoli while Alexandria was the only reasonably modern port capable of handling big ships. From Alexandria supplies moved by sea to the natural harbour of Mudros on the island of Lemnos, still some 75 miles from Gallipoli. Mudros acted as a ‘regulating station’ where supplies were transhipped again onto smaller (500 – 1,500 ton) ships.

Ships would either move directly to offshore positions at Gallipoli or to the island of Imbros which lay 12 miles away and acted as a staging area.<sup>(19)</sup> In addition to Imbros a number of transport ships were anchored off Gallipoli acting as floating supply depots

though the presence of enemy U-boats made this a risky venture. The business of getting to shore was undertaken by small boats and lighters supported by a few shallow-draft engine- powered monitors.

Once ashore the supplies were disembarked at piers constructed by engineers before conveyance forward to one of three British advanced bases located at ‘W’ Beach (Lancashire Landing) on Cape Helles, Anzac Cove and Suvla Bay. These bases were not sophisticated networks of warehousing and depots but simply large stockpiles located on the beaches and gullies leading from them and under the control of corps. Unlike the Western Front there was no rail or MT provision so supplies were moved from the advanced bases by men and mules to the refilling point with horsed transport



● *Shallow beaches like 'W' Beach made the loading and unloading of men and materials a constant challenge at Gallipoli.*

predominantly reserved for moving artillery shells and guns. The beach areas constituting this stage of the chain were miniscule – a mere 30-60 yards deep – and subject to regular Turkish machine gun and artillery fire. Once at the refilling point divisional supply trains took over and moved stores forward by hand or mule for the final 1½ to 3½ miles to the front lines.



### **Appalling Confusion: Mudros**

Ostensibly the detail of the two different supply chains highlights the enormous differences between the two fronts. Gallipoli was primarily a seaborne chain requiring multiple ship-to-ship transshipments whereas the channel crossing to France and Flanders was short and required only one port transshipment. On

the Western Front the British supply chain link intervals were measured in miles and there was land aplenty for advanced bases and stockpiles while space at Gallipoli was measured in meagre yards. There were also profound differences in transport infrastructure development between the two theatres of operation.

France and Belgium were modern industrial societies possessing an established, intricate and integrated canal, rail and road network as well as a large number of modern deep-water ports with all the associated wharfage, piers, machinery and techniques required for large-scale cargo handling and forwarding. Gallipoli was a remote and barely inhabited backwater possessed only of a few inferior local tracks and roads.

While the port of Alexandria was modern and well-equipped Mudros, the key operational logistical hub for the entire Dardanelles Campaign after the initial April 1915 landings, barely qualified as a harbour let alone a port. The island of Lemnos had no local timber or other construction materials, no roads, no rail, no buildings, no wharves, no piers, no cranes, no power and inadequate water supplies. Its' one quality lay in the fact that it was the only place close enough to Gallipoli that was safe from enemy submarines and bad weather.

Despite these problems Mudros was capable of being developed into a functioning port able to deal with the demands of the Gallipoli campaign as long as the requisite investment in facilities, infrastructure construction, administration, staff and time

were forthcoming. This meant prioritising engineering and logistical services and their needs over operational and tactical concerns, a period of about six months to complete the job and the requisite levels of staff and materials needed to maintain operations. (20) In reality, the opposite applied. The piecemeal development of the campaign and commanders' innate tendency to focus on troops, ammunition, shells and guns meant that as late as August 1915 Mudros had evolved from a barren rock to a barren rock with a few inadequate jetties. The MEF's Director of Works, Brig.-Gen. Alain Chartier de L. Joly de Lotbinière, the 'Architect of Electrification in Asia', (21) described Mudros as "anything but an ideal base" while General Edward Altham, Inspector General of Communications [IGC] noted the "appalling confusion" at Mudros, further compounded by a serious shortage of competent staff, labour and small cargo craft. (22)

The absence of shore depots, transport and associated cargo handling facilities led to the use of inadequately converted and expensive store ships as floating depots requiring ships to lie at anchor until a berth alongside one of the five depots became available. Small craft were also used but these were very limited in number and capacity.

The snail-like rate of discharge meant ships waited for weeks on end before being unloaded and many left before their cargos were fully unloaded. In one case a ship carrying a much-needed 15-inch howitzer lay at anchor for four months before returning with its precious cargo still aboard. These delays meant many ships carrying vital but perishable supplies found their cargos spoiled when finally

discharged while many urgently needed animals sickened or dead. It also meant that the ships themselves were unavailable for other duties, in turn leading to delays and shortages elsewhere and adding to the global problem of increasing shipping scarcity.

Compounding the problem still further was the almost universal absence of ships manifests. Without these it was impossible to know which ship contained what items or determine discharge priorities. It also made it nigh-on impossible to advise commanders of what stocks were available and when they could be expected. Ships holds had to be individually searched

**“Chronic shortages of the most basic items, such as decent food and water led to exhaustion and disease; troops were routinely short of ammunition at critical moments.”**

to locate urgent items - often one might discover a machine gun on one ship, its tripod on another and its toolkit on yet another, while in another example 10,000 urgently needed shells lay unused because the friction tubes needed to fire them could not be found.

Even when berthed there were further delays due to a chronic shortage of manpower, a problem that was never adequately addressed despite the hiring of civilian labour. Mudros was a chaotic and muddled mess that was deficient in just about every respect. The fact that it managed to maintain even a precarious supply line to Gallipoli qualifies as 'near

miraculous' and is a testament to the determination of the unsung heroes of Mudros who laboured against the odds.

Undoubtedly the campaign suffered, though to what extent is difficult to assess as one cannot point to an undelivered howitzer or tripod-less machine gun and say "that was the cause of our defeat" because the consequences of inadequate military logistics are rarely immediate or obvious. The symptoms of defective logistics are rather like rust: cumulative, unobtrusive and insidious. Military forces are gradually debilitated rather than dramatically broken while opportunities and scope of action are increasingly limited rather than immediately denied. But just as rust will cause the mightiest bridge to collapse eventually, deficient supply can ultimately cripple an army and it is clear that the troops at Gallipoli were in just such a state.

Chronic shortages of the most basic items such as decent food and water led to exhaustion and disease; troops were routinely short of ammunition at critical moments; trench stores of all natures were scant on the ground; engineering materials, timber, tools, water pumps, buckets, grease, wagons, medical supplies, saddle packs and a thousand-and-one other examples of the essential impedimenta of modern warfare were all in short supply. Since Hamilton could not even maintain the most basic reserve stocks on the peninsula the receipt of the guns and shells he craved from France would have no doubt overwhelmed Mudros and broken the supply chain.

Looking through a logistical lens it is clear that the savage fighting and horrendous losses sustained





by the troops on Gallipoli was a pointless and tragic waste because even if successful the long hoped-for breakthrough could only lead to failure as supplying the troops would have been quite simply impossible.



### The French Connection

Approximately 3,500 miles away from the barren paucity of Mudros lay the modern French port of Boulogne. Originally founded by the Romans the port was progressively enlarged and modernised from the 1830s onwards, its development matching the increased expansion of shipping as the century progressed. By 1914 it was capable of handling not only thousands of passengers on the main cross-channel ferry route from Folkestone but also the largest ocean-going vessels and their cargos. It was well



connected to the Nord Railway system with a direct route to Paris and good access to the wider French and Belgian rail network. This meant it could act as a 'rapid transit' port quickly transferring passengers and goods from quayside through transit sheds (used for temporary storage of cargo) and onto the railways.

As such it was one of the obvious 'ports of choice' for the BEF in the event of war and plans were made with the French in the years prior to 1914 for this eventuality including an increased investment in cargo handling and infrastructure

development at Bassin Loubet, the basin allocated to the British. By late-1914 the static nature of the Western Front and the transfer of the BEF to Northern France and Flanders increased its military importance especially given the rapid expansion of the BEF and the initial refusal of France to allow the BEF use of Calais. Ostensibly the difference between Mudros and Boulogne could not be starker but surprisingly by mid-1915 they both suffered from remarkably similar problems. The small role envisaged by pre-war Anglo-French military planners for the BEF implied an equally small force with only minimum transport needs and for that reason France agreed to undertake responsibility for all BEF logistical needs up to the forward zone. France would work, maintain and develop the ports, railways and roads using French labour while the BEF contributed a small number of

# We're both needed to serve the Guns!



## FILL UP THE RANKS! PILE UP THE MUNITIONS!

men to act in liaison and supervision roles. (24)

Nobody had envisaged the savagery and length of the war or the dramatic expansion the BEF would undergo in response. That expansion was extraordinarily rapid. The original 85,000 men comprising the BEF in August 1914 numbered 250,000 by December, topping the half-million mark in July 1915 and reaching nearly a million by December.<sup>25</sup> As the force expanded tonnage requirements multiplied out of all proportion due to the ever-increasing demand for currently issued and new matériel far more than that originally envisaged.

At Bassin Loubet the Royal Navy was responsible for berthing ships and supervising the discharge of cargoes onto the quayside utilising French labour, where-upon the army oversaw the removal and handling of

stores from quayside onwards under the control of the French railway authorities. Because Boulogne was a transit port and lacked storage space it was imperative that goods were moved quickly and efficiently from port to rail to avoid congestion. However, efficiency was decreasing for a number of interrelated reasons. Even before the war French efficiency was poor compared with Britain: at Liverpool labour worked 24 hours per day and could discharge 700 tons of cargo per ship per day. (26) At Bassin Loubet French labour worked a 12-hour day and unloaded an average of only 300 tons.

France had suffered horrendous losses in the opening months of the war and the demand for military manpower meant that the available labour pool was not only shrinking but increasingly composed of older men and inexperienced youths, thereby

adding to the fall in productivity. The significance of this moved BEF IGC General Sir Frederick Robb to complain that the French were capable of providing only one-third of the promised labour force required. (27)

The overriding need to get ships loaded and out of the English Channel ports led to haphazard loading and an absence of cargo manifests. Just as at Mudros, staff had no idea what cargo ships carried, could not prioritise loading and often had to partially unload ships before sending them back out to anchorage, while component parts of machine guns or artillery pieces were often carried on separate ships. Rapid ship turnaround was the Royal Navy's priority, so cargoes were simply dumped on quaysides without consideration of what was being unloaded or how it was going to be moved, leaving the army with the headache of sorting out the mess

● *The pressure to increase material for the war, in particular shells, resulted in the Parliamentary Recruitment Committee putting out a new poster (left) in 1915, whilst the need to lay new railway supply lines (right) on foreign shores remained unrelenting.*

at a time when French port and rail efficiency was decreasing. Under these circumstances stores began to pile up and the lack of covered storage compounded the problem still further. The net result was increasing chaos and congestion; staff unable to locate and supply critical items, perishables rotting and ships lying at anchor for weeks waiting to be unloaded.

As early as December 1914 Boulogne was causing concern and in January BEF Quartermaster-General [QMG] General William Robertson discussed the idea of administratively centralising Bassin Loubet and its associated railways. South-Eastern & Chatham Railway [SE&CR] manager Sir Francis Dent had long pre-war experience of working with the both the port and the French Nord Railway and at the beginning of the war he already had a number of key staff working at Boulogne. (28) After inspecting the port he proposed that SE&CR take over its running along civilian commercial lines and take responsibility from the instant the ship berthed until the



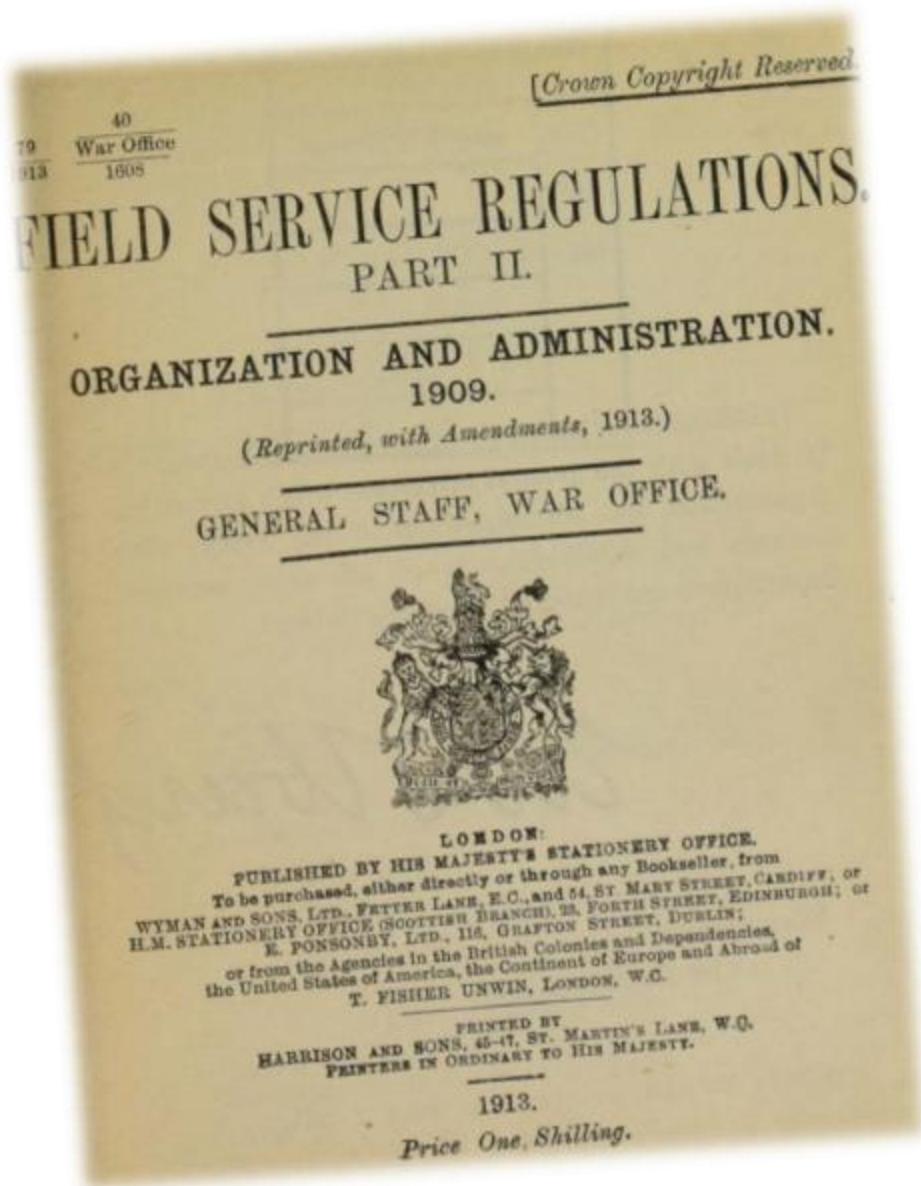
loaded French trains entered the rail system, thereby replacing the administratively cumbersome navy-army administrative 'split' with a centralised system.

The BEF agreed to this singular experiment in 'civilianism' and on 25 April 1915 the SE&CR took over. Dent instituted British civil working and management practices and drew from his own

pool of workers. He imported seven locomotives to improve transit rates, increased the number of rail sidings and storage hangars and generally improved Bassin Loubet's facilities. The 'Dent Scheme' was a success, but it was not seen as such by the military who closed the scheme down in October 1915, the whole reverting back to their control. There were a number of reasons for this.

In the first instance GHQ now believed it had overcome its initial chronic shortage and now had enough Royal Engineer [RE] and other military personnel to staff the port sufficiently. Secondly, Dent's overly

**“Despite their apparent differences one thing is clear. Both Mudros and Bassin Loubet were incapable of handling rapidly increased tonnage demands and suffered from severe congestion and associated issues.”**



ambitious tonnage clearance projections were not achieved and although his civilian control scheme made this the most efficient of all the French ports on paper he was deemed to have 'failed' to fulfil his promise. Thirdly, and most importantly, the rapidly increasing torrent of men and materials simply outpaced SE&CR improvements.

To illustrate the enormity of this increase between 1 April and 1 November 1915 the number of troops arriving in France more than doubled from 464,103 to 938,930 while 18 pounder ammunition deliveries increased from 52,396 rounds to 813,253 between June and December. (29) To add to these difficulties there was also an enormous increase in

heavy-calibre ammunition being delivered, one example being 6-inch howitzer ammunition where deliveries rocketed from a paltry 100 rounds in June to 19,075 in December. (30) The net result of this was the re-authorisation of open-air stacking during the summer and a growing lack of labour capable of handling the increasing amount of munitions landed at Boulogne. This in turn meant an influx of military personnel to supplement civilian labour and the eventual transfer of responsibility back to the BEF.

Transfer back to military control did not solve the underlying problems, which remained the same. The only difference was the fact that there was a 'lull' of sorts after autumn 1915 because

by that time the initial rate of expansion of men and materials began to decrease as the BEF approached its full manpower potential. This lull appeared to support the wisdom of reversion, but it was relatively short-lived. As the BEF prepared for the Somme battles of 1916 and the rate of men and supplies once more accelerated, especially the colossal increase in munitions, brought the ports to a virtual standstill and spread throughout the entire BEF chain of supply right up to the front line. (31)

Despite their apparent differences one thing is clear. Both Mudros and Bassin Loubet were incapable of handling rapidly increased tonnage and suffered from severe congestion and, as a consequence, other associated problems.

□□□□

#### Brass Hats or Frock coats

Mudros, Bassin Loubet and the brief tenure of Sir Arthur Dent also pose the issue of administrative organisation and the question of whether the military or civilians should deal with the task of supply matters in an industrialised war.

One of the first modern war correspondents, WH Russell of *The Times*, wrote in regard to the army's mismanagement of the Crimean War whether it would be better to transfer control from the regular army to "...the great railway administrators and contractors, the men who manage lines of packets, who own and direct successfully the operations of whole fleets of merchant ships". (32) On 3 July, 1915 General Sir Ian Hamilton wrote, "Have also written to Cowans [QMG at the War Office] protesting once more that we should have business brains to

run the most intricate business proposition at present on tap in the world – our communications.”<sup>(33)</sup>

These two almost-identical pleas bookend over half a century of rapid industrialisation of warfare and regular army ambivalence – verging on outright hostility at times – towards the role of civilian experts and methods in modern conflict. It was an issue that would come to the fore on the Western Front in the autumn of 1916, leading to a revolution in the running of the BEF’s logistical system.

The purpose of the Royal Military College, Kingston (Ontario) was to produce graduates fitted not only for the military but also to become the finest civil engineers and rail expert Brig.-Gen. Sir Édouard Percy Cranwill Girouard RE was an almost archetypal product of that institution: a ‘hybrid’ military-civil engineer.<sup>(34)</sup> After working for two years with the Canadian Pacific Railway in the USA at the cutting edge of railway engineering and administration he was commissioned into the RE whereupon he came to the attention of Lord Kitchener who engaged him in railway construction throughout Egypt and Sudan.

**“At Gallipoli Hamilton did not receive the ‘business brains’ he sought, in fact he did not receive any ‘brains’ until June whereupon Major General Alexander Wallace, was finally appointed.”**



● **A French supply depot at Mudros Harbour.**

Kitchener appointed Girouard as Director of Railways during the South African War and Girouard centralised control using civilian administrative and management systems to rescue the hopelessly fragmented and mismanaged railway system from the hands of the military.<sup>(35)</sup> In 1912 Girouard became the Managing Director of Armstrong-Whitworth’s Elswick Works and in October 1914 Kitchener asked him to travel to France and evaluate the state of the BEF’s transport system. His ‘Report on rail transport arrangements’ criticised the BEF transport administration for being overly-compartmentalised, poorly-managed and dogged by the problems of appointments made due to military seniority rather than expertise.<sup>(36)</sup>

Echoing his South-African experience he recommended implementing a centralised system controlled from GHQ and staffed by experts.<sup>(37)</sup> This was roundly rejected by BEF C-in-C Sir John French and fiercely criticised by the IGC and future BEF QMG General RC Maxwell. The basis of their criticism dates

to the Boer War where Lord Roberts bungled attempts at centralisation led to chaos, a situation only rectified by the efforts of French who championed a reversion to decentralised methods.<sup>(38)</sup> Whilst not unreasonable in South Africa the effect was to throw out the lesson of Girouard’s successful baby with Robert’s bathwater.

In addition, the military attitude at the time was one of an administrative staff who should “accept loyally the design of the strategist” irrespective of the lack of experience or knowledge on the part of that strategist.<sup>(39)</sup> Girouard’s report was shelved.

At Gallipoli Hamilton did not receive the ‘business brains’ that he sought from Cowans, in fact he did not receive any ‘brains’ at all until 7 June whereupon an IGC, Maj.-Gen. Alexander Wallace, was finally appointed - though his all-important staff did not arrive until August. Wallace, an extraneous ‘dug-out’ general languishing in Egypt, was a classic example of appointment according to rote rather than ability. He had no staff and, more

importantly, absolutely no experience of logistics of any sort but was available and had rank. Wallace's tenure did not last long as it became blindingly obvious that he was well out of his depth.

Hamilton wanted a big-thinking man of ability and forcefulness capable of acting on his own initiative and the chain of command be damned! What he got was an IGC who "...wouldn't dream of ordering a toothpick without consulting General Headquarters". Hamilton's Chief of Staff, Major General Walter P Braithwaite described Wallace as "an apology for an IGC" and even Wallace himself clearly doubted his own ability. (40) Wallace's replacement, Lt-General Edward Altham, arrived on 22 July and represented a considerable improvement over his predecessor. His unceasing work managed to improve matters to a degree at Mudros sufficient to maintain an admittedly inefficient but functioning LoC to the beaches. Nevertheless, the lateness of his arrival and the general lack of regard in the British Army of the importance of able administrators meant that had the all-important August offensives at Gallipoli actually succeeded then Mudros and the LoC would have undoubtedly collapsed.

Administration had always been the poor relation of the British Army and even the founding of Staff College designed to produce professional soldiers did little to alter this situation. Few junior officers aspired to administrative positions in an army whose ethos was dominated by practicalities of regimentalism and where opportunities for promotion were few and far between.

The 'regimental system' was very much suited to the vagaries of Britain's nineteenth-century



● **Different fronts and different challenges.**

colonial 'small wars' where pragmatic decisions were taken by officers commanding small, regular forces. Command and control were located with operational commanders and the duty of administration was to provide commanders with their stated requirements. Administrative positions were regarded as a backwater and the situation was significantly worsened by the separation of operations (known as 'G') and administration ('Q') symbolised clearly when in 1909 the army's fighting 'bible' Field Service Regulations was published in two parts corresponding with 'G' and 'Q'. (41)

The rationale was reasonably sound: commanders were relieved of the responsibility for administration leaving them free to focus on operations. Not unnaturally the army focus tended towards 'G' with 'Q' something of an afterthought, and commanders tended to leave 'Q' to get on with their job, only getting involved if there was a problem. It also meant that 'G'



and 'Q' officers rarely collaborated or indeed had anything to do with each other, even to the extent that they rarely dined together in the mess. With the advent of mass, modern warfare, a necessarily expanding administration and the absence of any developed network between the two, 'G' officers had little appreciation of the problems that 'Q' faced while 'Q' officers experienced in the pragmatic school of regiment and colonial war lacked the level of logistical expertise and experience this war demanded.

The whole problem was summed up by the newly-appointed MEF C-in-C, General Sir Charles Monro in conversation with his Chief of General Staff [CGS] while inspecting his staff at Mudros: "As we passed between the line of them Sir Charles said to me, 'Did you ever meet such a down and out lot of fellows in your life?' I agreed and subsequently discovered the reason why. They were not a united staff – or in fact, as they knew, not a staff at all. I found the General Staff

**“Despite all the foregoing the British Army did manage to maintain a line of supply to both theatres however precarious and inefficient, and at no point during 1915 were they so affected by shortages that they were unable to function.”**

Officers thought themselves miles superior to mere Administrative and Quartermaster Officers and they were not on speaking terms.”<sup>(42)</sup>

In 1933 Major General JC Harding-Newman writing about ‘G’ staff noted acidly, “There seemed to be little administrative influence on the decisions arrived at. In fact, those responsible for the plan of action were never given the benefit of expert or technical knowledge on the transportation situation. They certainly had none themselves.”<sup>(43)</sup>

□□□□

## Conclusion

Despite all the foregoing the British Army did manage to maintain a line of supply to both theatres however precarious and inefficient, and at no point during 1915 were they so affected by shortages that they were unable to function: operations were delayed, altered and denuded but poor logistics alone do not explain the failures of Suvla or Loos. The reasons for this are fairly straightforward: at no point during 1915 was the LoC tested by any significant advance. After the August failures at Gallipoli the MEF was reduced to holding the line while others decided whether or not to withdraw, while in France the BEF was still swelling but by December the rate of expansion decreasing.

In both cases the practical nature of the British Army nurtured by pre-war regimentalism engendered what Ian M Brown described as ad-hocism: pragmatic solutions to immediate problems implemented as and when they arose.<sup>(44)</sup> These solutions sufficed but only so long as the lack of munitions production at home

prevented the army from undertaking large-scale, continuous offensives. That sort of offensive never developed at Gallipoli but in 1916 the BEF, immeasurably strengthened by the fruits of the Ministry of Munitions, launched the Battles of the Somme and discovered that ‘winging it’ was no substitute for sound large-scale logistical administration staffed by experts in their fields.

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## Notes

- (1) “The First Gas Attack”. Extract from the diary of Rifleman Anthony R. Hossack, Queen Victoria Rifles in C.B. Purdom (ed.), *Everyman at War* (London, 1930)
- (2) J.E. Edmonds, *Official History of the Great War, Military Operations France & Belgium 1915*, Vol. I, [Hereafter ‘BOH’] (London, 1927), pp. 158–358.
- (3) 1st (Australian) Division, New Zealand & Australian Division, Royal Naval Division, 29th Division. A subsidiary landing was made at Gaba Tepe (Anzac Cove), 13 miles north of Helles.
- (4) Second Battle of Krithia, 6–8 May, 1915.
- (5) Battle of Aubers Ridge, 9 May, 1915.
- (6) BOH, 1915, Vol I, p. 331.
- (7) BOH, 1915, Vol II, p. 71.
- (8) 10th (Irish) Division, 11th (Northern) Division, 13th (Western) Division. Later Hamilton received two additional divisions, the 53rd (Welsh) Division and the 54th (East Anglian) Division.
- (9) Hamilton, *Gallipoli Diary*, Vol. II, (London, 1920), pp. 279–297; BOH, 1915, Vol. II, p. 395.
- (10) The National Archives [Hereafter ‘TNA’], CAB 23/13/21, War Cabinet, 11 October, 1917, p. 108.
- (11) Anon., ‘The Logician’s Lament’ <<http://www.logisticsworld.com/logistics/quotations.htm>> (Accessed; 29/09/2017).
- (12) BOH, 1915, Vol I, p. 57.
- (13) The other side of the equation was Hamilton’s entirely reasonable observation that shell allocation for Gallipoli was risible.
- (14) From 3 April–3 July, 1915, 790,306 x 18 pounder shells were sent to the Western Front and 182,372 to Gallipoli. The latter figure represents 24 percent of the total sent to the Western Front during this period.
- (15) JC Harding-Newman, *Modern Military Administration, Organization & Transportation*, (Aldershot, 1933), p. 18.
- (16) Lt.-Gen. Jan Smuts, *The League of Nations: A Practical Suggestion*, (London, 1918), p. 53.
- (17) The distance between railhead and refilling point varied dramatically according to circumstance.
- (18) Gen. Sir Ian Hamilton to Lt.-Gen. John Maxwell quoted in Rhys Crawley, *Climax at Gallipoli: The Failure of the August Offensive*, (Oklahoma, 2014), p. 124. Much of what follows in relation to Gallipoli is based upon Rhys Crawley’s excellent work in this field.
- (19) Ships over 500 tons were forbidden from approaching the Gallipoli beaches.
- (20) Superintending Transport Officer, Captain Henry Simpson quoted in Rhys Crawley, *Climax at Gallipoli: The Failure of the August Offensive*, (Oklahoma, 2014), p. 131.
- (21) S. Srikumar, *Kolar Gold Field: Unfolding the Untold*, (India, 2014), p. 412.
- (22) Brig.-Gen. AC de L Joly de Lotbinière and Lt.-Gen. Edward Altham quoted in Rhys Crawley, *Climax at Gallipoli: The Failure of the August Offensive*, (Oklahoma, 2014), p. 130.
- (23) I am grateful to my former student Dr Chris Phillips whose work in this area has greatly informed my own.
- (24) AM Henniker, *Official History of the Great War: Transportation on the Western Front, 1914–1918*, (London, 1937), pp. 1–18.
- (25) War Office, *Statistics of the Military Effort of the British Empire During the Great War, 1914–1920*, (London, 1922), p. 64 (iii).
- (26) AM Henniker, *Official History of the Great War: Transportation on the Western Front, 1914–1918*, (London, 1937), p. 182.
- (27) Chris Phillips, ‘Civil-Military co-operation before Geddes: logistics management on the Western Front 1914–16’, <[https://www.academia.edu/9386687/Civil-Military\\_co-operation\\_before\\_Geddes\\_logistics\\_management\\_on\\_the\\_Western\\_Front\\_1914-1916](https://www.academia.edu/9386687/Civil-Military_co-operation_before_Geddes_logistics_management_on_the_Western_Front_1914-1916)> (Accessed: 01/10/2017)
- (28) AM Henniker, *Transportation on the Western Front, 1914–1918*, (London, 1937), p. 91.
- (29) War Office, *Statistics of the Military Effort of the British Empire During the Great War, 1914–1920*, (London, 1922), p. 433.
- (30) *Ibid*, p. 433.
- (31) Ian M Brown, *Logistics on the Western Front*, (Westport CT, 1998), p. 124; AM Henniker, *Transportation on the Western Front, 1914–1918*, (London, 1937), pp. 179–183.
- (32) Asa Briggs, *Victorian People: A Reassessment of Persons and Themes 1815–67* (1st pub. 1954. This ed. Penguin, London, 1990), p. 72.
- (33) Gen. Sir Ian Hamilton, *Gallipoli Diary*, Vol. I, (London, 1920), p. 365.
- (34) Ernest F. Wurtele, *The Royal Military College of Canada in Various Authorities, Canada in the Great War: An Authentic Account of the Military History of Canada From the Earliest Days to the Close of the War of the Nations*, (Toronto; 1917–1921), Vol. V, pp. 356–7.
- (35) EA Pratt, *The Rise of Rail Power in War and Conquest 1833–1914*, (London, 1915), pp. 234–236.
- (36) The National Archive [TNA], WO 32/5144, P. Girouard, ‘Report on Rail Transport Arrangements’. My thanks to Dr Chris Phillips for informing me about this source.
- (37) TNA, WO 32/5144, ‘Report on rail transport arrangements’. See also: AM Henniker, *Transportation on the Western Front, 1914–1918*, (London, 1937), pp. 77–81.
- (38) TNA, WO 32/5144, ‘Report on rail transport arrangements’, (appended notes by RC Maxwell and FS Robb). See also: Thomas Packenham, *The Boer War*, (London, 1997), p. 312.
- (39) D Chapman-Huston & O Rutter, *General Sir John Cowans: The Quartermaster-General of the Great War*, (London, 1924), Vol. II, p. 162.
- (40) Rhys Crawley, *Climax at Gallipoli: The Failure of the August Offensive*, (Oklahoma, 2014), p. 143–44.
- (41) Revised in 1912 and 1914 respectively.
- (42) Peter Hart, *Gallipoli*, (London; 2011), p. 398.
- (43) Maj.-Gen. J.C. Harding-Newman, *Modern Military Administration, Organization & Transportation* (Aldershot, 1933), p. 16.
- (44) See: Ian M Brown, *British Logistics on the Western Front 1914–1918*, (Westport CT, 1998), passim.

# ‘The superhumanly possible...’

*The problem with the Somme, as many scholars have noted is that now infamous date: 1 July 1916. At a stroke of the pen of the ‘Battles Nomenclature Committee’ the Somme ‘began’; a fixed, immutable, defined event. In the following article (first published in Stand To! in July 2016 and edited by the late John Cooksey) Rob contends that 1 July was no more than a movement in a much larger symphony that started well before and ended, after many codas and reprises, much later than the confines suggested by mere dates. In this piece he argues that such limitations do not apply solely to debate about the military course of the battle but have also resulted in a failure to study the central role that industry and logistics played in France, Britain and internationally in preparation for the battle. In a war absolutely defined by industry, mass production and distribution he argues that this remains an unforgivable omission...*



## Critical year

As early as February 1915 Lloyd George had circulated a memo calling for the industrial and military mobilisation of the entire nation. This was based upon two notions: that current preparations were wholly inadequate for a war of such magnitude and that the war would not be ‘over by Christmas’ (be that 1914 or 1915) but would last at least until the end of 1916. By late spring 1915, following Russian defeats, the failure of the Dardanelles expedition and continuing French losses it became clear that 1916 would be

Britain’s critical year and the ‘semi-prescient’ date of 30 June, 1916 became the imperative delivery deadline for a vastly expanded munitions and ordnance programme that staggered the imagination.

Given the siege nature of the war and front line demands for ‘*more guns, for heavier guns, and for more ammunition for heavy guns*’ one of the most concrete examples of ‘Somme preparation’ were the various Gun Programmes formulated throughout the summer of 1915 beginning with Programme ‘A’ at the Anglo–French Conference in Boulogne in June.

This was a watershed moment as the programme was not merely concerned with *ad hoc* attempts to try and maintain the British Expeditionary Force (BEF) in the field but to supply a future, vastly expanded BEF of seventy divisions with the medium and heavy guns it would need to fight on a ‘continental scale’. In this respect the British were guided very much by the Germans and the French who were vigorously responding to demands from the front ‘*by aiming to equip the army with one 6” or heavier gun for each field gun*’.





● **British troops celebrating the arrival of a fresh supply of shells on the Western Front.**



# 1915 - 1916

Even before Programme 'A' details were settled, a revised programme ('Programme 'B') was proposed by Commander in Chief Sir John French (based upon a force of fifty divisions and rejected as too conservative by Lloyd George), quickly superseded by Programme 'C' (seventy divisions again) and finally the gigantic Programme 'C.1' in August–September based on a force of 100 divisions, final deliveries to be made by September 1916.

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## Turf wars

Paradoxically, Secretary of State Lord Kitchener and the War Office fought tooth and nail against Lloyd George's 'C.1' programme even though it

proposed to deliver exactly what the military wanted. The reasons were byzantine in their complexity but reveal a nascent British 'war machine' that at times seemed more preoccupied with its own 'turf wars' than with the one raging in France: a veritable 'war behind the war' - the main elements of which were power, ignorance, intrigue and hubris.

From a munitions technical perspective, placing very large orders created economies of scale as it became worthwhile for manufacturers, especially in the USA, to invest in the necessary large-scale tooling and machinery; thereby speeding-up order completion and delivery and 'guaranteeing' the seventy-division target by June 1916. This was made clear in a letter from

the Ministry of Munitions to the War Office in early October 1915:

*"... the Minister is of the opinion that the placing of large orders now will have the effect of expediting deliveries, and that they are necessary in order to ensure the delivery during the spring and summer of 1916 of a substantial part of even the War Office requirements. I am to add that it is Mr Lloyd George's view that the early delivery of the extra guns might very well have a decisive effect on the campaign."*

The *lingua franca* of the latter sentence represents a scarcely-veiled ongoing criticism of a 'business-as-usual' political-military cabal with Prime Minister Asquith at its apex that had failed to grasp this war and



## The ‘Cornwallis–West Affair’

● *Patsy Taylour (right) became Prince Edward’s mistress when she was just 16 years of age, and subsequently married William Cornwallis-West, the Lord-Lieutenant of Denbighshire, with whom she had three children. It has been claimed that the marriage, to a man much older than herself, was initially undertaken to protect Prince Edward from gossip. Patsy would certainly continue to have affairs, including a relationship in 1915 with a young soldier in convalescence, Patrick Barrett, for whom she used her influence to get promoted to the rank of officer. There was uproar when the matter was discovered and the whole matter became something of a political football – one that would ultimately see Patsy appear in court and those who had been involved in trying to help cover-up the issue, such as Quarter Master General Cowans (centre), disgraced. Lloyd George (left) was accused of using the whole sorry incident to push Cowans, a much-respected officer (and womaniser), to one side.*

continued to do so. If Asquith, Kitchener and Quarter Master General (QMG) John ‘Jack’ Cowans at the War Office would not act decisively then Lloyd George would. The position of the War Office, Sir John French and Kitchener was not without substance. Understandably peeved at the high-handedness of the Ministry (the War Office’s first inkling of ‘C.1’ programme came in mid-September) there was also another serious issue: where and how were the extra 169,204 officers and men to be found to man these additional ‘surplus’ guns (as the War Office viewed them) and how were they to be organised, equipped, billeted and trained? The British Army turned out ‘equipments, complete’. It did not send just a

gun to France but all the men, officers, horses, motor-transport, ammunition spares and support it required to function immediately upon arrival. Extra guns were not ‘equipments, complete’ and were thus a ‘bane’ and not a ‘boon’. Consequently, the War Office fought its corner against a Ministry not prepared to budge, with the whole affair dragging on until February 1916 when the War Office finally gave up.



### Cabals

Underpinning all of this apparently technical wrangling was a veritable viper’s nest of competing socio-political elite

‘cabals’ worthy of a Shakespearian drama. These included newspaper magnate Lord Northcliffe, the thoroughly scurrilous Colonel Repington (who famously broke the ‘Shells Scandal’ in 1915), Asquith, Lloyd George, Churchill, French, Quarter Master General Jack Cowans (the ultimate ‘Ladies Man’ whose appetite eclipsed that of Repington), Emilie Grigsby, Winifred Bennet, Sylvia Bennet and Emily Unger (ex-mistresses of both Repington and Jack Cowans, some of whom facilitated an anti-Haig ‘salon’ in London), the Hamiltons, Protheros and Haldanes, amongst others. In Cowans’ case it would ultimately lead to the tawdry ‘Cornwallis–West Affair’ that ended with a Court of

Inquiry and the severe censuring of both Cowans and Patsy Cornwallis–West, who Cowans was suspected of ‘knowing’ on rather too intimate terms (see top panel on the left).

Whilst juicily compelling, the extent to which this affected munitions policy is unknown. It does, however, seem clear that the Ministry and the War Office were engaged in undeclared hostilities and that nothing was ‘off bounds’ - Lloyd George was not above exploiting the above scandal to remove Cowans for his own ends, despite his sterling service in the role of QMG; a role so important he ultimately retained it. Cowans’ biographers (perhaps ‘hagiographers’ is a more apt term) devote nearly one–quarter of their 1916 chapter to a trenchant defence of Cowans and an equally trenchant attack on Lloyd George, almost gleefully noting that the munition achievements of 1916 were not the consequence of the ‘Welsh Wizard’ but of the ‘old’ army in the form of Cowans and the Master General of Ordnance, Sir Stanley B Von Donop.

More importantly Sir James Edmonds’ account of Somme preparations in the *Official History* almost delights in pointing out in great detail the failure of the Ministry of Munitions to supply the quantity and quality of ordnance required, darkly (but vaguely) noting that only half the guns required were available in addition to an appallingly low quantity and quality of ammunition.

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### Input, output

At a far more prosaic level there was still the very practical

question of fully–equipping and supporting a vastly expanded army ready to take the field by mid–1916. While high society embroiled itself in intrigue, infighting and the pursuit of power; guns, shells and munitions of all types still needed manufacturing. The placing of orders, no matter how small or large, does not magically produce finished articles and the sourcing, production, organisation and delivery of guns, shells and thousands of other necessary items is a complex undertaking.

**“The re–dedication and expansion of existing factories would barely suffice; new factories would be needed. In turn this required land and the means to acquire the land as well as the necessary construction work.”**

The proper term for the time-lag between ‘initial input’ and ‘final output’ is the wonderful word ‘hysteresis’, and in the case of preparing for the big 1916 effort hysteresis was perhaps the most important factor of all.

The scale of warfare on the Western Front caught all the belligerents by surprise but both France and Germany already had ‘million–man’ armies and consequently already had the scale of industrial production and labour control methods required for expansion, but Britain did not. Britain’s ordnance and munitions capacity was commensurate with maintaining what amounted to an Imperial ‘police force’ and was therefore almost insignificantly tiny despite her industrial prowess in other areas. That prowess gave Britain potential but to realise this she would have

to take what amounted to a ‘cottage industry’ and turn this into the world’s biggest munitions and ordnance industry from scratch within 12–18 months.

The re–dedication and expansion of existing factories would barely suffice; new factories would be needed - and lots of them. In turn this required land and the means to acquire the land as well as the necessary construction work. ‘Construction’ in this case also includes the innumerable roads, railways, sidings, signalling facilities, storage warehouses, locomotives, motor vehicles, engines, telephone and telegraph facilities and a thousand–and–one other essential infrastructure items required both within the factories and also to connect them to the national transport infrastructure, (itself requiring considerable upgrading and expansion). It seems almost churlish to note the vast expansion in shipping and port facilities required to supply these factories in a country that was particularly dependent upon imports. Once built these new factories needed equipping with new machinery: lathes, turners, mandrills, reamers, drills, presses, steam hammers, cranes, welders, steamers, ovens, forges, casting facilities, gantries, conveyers, oil storage, lubricants and so on.

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### Synchronised

In order to ‘produce’ all this production machinery other factories needed to be similarly re–dedicated, expanded and built. Parts and subassemblies had to be transported from facility to facility to build a single item and all had to be administered, co–ordinated and synchronised not just within

● ***A female 'Clippie' working on the Bolton Tramways.***

Britain but globally. Furthermore, as new designs and processes were introduced or old ones upgraded so each element in this phenomenally complex undertaking had to be updated, altered or re-machined.

Even when factories were completed time continued to lag. Artillery, rifles and especially machine guns are complex pieces of machinery requiring many hundreds of parts, each of which has to be machined and hand-worked to exactly the right size and correct tolerance between parts by highly-skilled workers, which takes about twelve months. Shell production is no less onerous, taking approximately three months from initial forging to completed product. In addition, all items require inspection and testing and, in the case of shells, at least two weeks is required - considerably less than during peacetime when two months was the normal allocation. Changes to existing patterns were numerous and again each change required more time to implement.

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**Revolutionary miracle**

Clearly something approaching a revolution in British industry was called for but this pales into insignificance when compared with the accompanying social and cultural revolution required to provide the manpower to achieve what amounted to a miracle.

This revolutionary miracle encompassed the whole nation and beyond and is impossible to cover in any meaningful way



within the confines of this article, but to touch upon at least some aspects I turn to my adopted town of Bolton...

The increase in the scope and scale of the war demanded ever-more industrial output and ever-more men to fight. The Ministry of Munitions had performed a minor miracle in organising such a colossal expansion of industry but in doing so it changed the very fabric of working-class society.

Although many skilled working men who were eligible for service had been 'badged' as vital war workers the demands of the army for more and more recruits were insatiable and this could not be ignored. Simultaneously it also became obvious that more and more labour was needed to expand manufacturing output and manpower demands soared.



### Uproar

The problem was illustrated by the case of Dobson & Barlow who were engaged in vital war production but who lost 1,600 of their employees to the army. The only way to solve the problem of meeting the demand for more industrial manpower from a declining pool of male workers was to employ women and children on work that had previously been the exclusive domain of men. This caused uproar amongst men who feared skill dilution would lead to the permanent erosion of hard fought for pay, conditions and privileges. Furthermore, it challenged fundamental social and cultural perceptions of the 'proper' roles of men and women and the relationship between them. Nevertheless, the overriding need to win the war saw thousands of Bolton women

employed in war industry jobs as well as replacing men in existing positions who had gone to war.

This was not an easy process and Bolton was initially reluctant to accept the new roles of women and the changes that went with their arrival in the workplace. One of the major objections was based upon the doubtful moral character of women summed up by the following anonymous quote: *"The moral standard of English girls – of educated English girls too – is so low that it would be unsafe to employ them in public places side by side with educated English men."*

**"The demand for workers was so great that the huge influx of women workers was still not enough, and employers turned to children aged between 14 and 16 years to fill the vacancies."**

The concept of women having the money to spend on further corruption sent shudders down the spines of Bolton's 'Great and Good'. Attempting to stave off the inevitable, Bolton Labour Exchange went into denial, bizarrely declaring in June 1915 that there was no demand for women workers. Bolton Tramways Department took the view that women were "unsuited" to work the trams, either as drivers or 'clippies'. Practical considerations would, of course, force Bolton to accept these difficult changes. In December 1915 the Tramways Department revisited the question of women workers and formed a special committee to examine the issue. They visited other towns in Lancashire where women already worked on the

trams and in January 1916 they began recruiting women, taking on twenty by the end of the month and paying them the same rate as men.



### Meeting the challenge

Industry, driven by the need to produce munitions, reacted more positively to the presence of women than the municipal authorities and by July 1915 had organised munitions training classes. These took place at the Bolton Technical School in Bridgeman Place and consisted of approximately ten separate classes. These were open to both men and women between the ages of 21 and 40 though women were restricted to "lighter mechanical work than men". By 1917 the demand for military recruits had become so acute that even this distinction was eroded. Women met the challenge of 'heavy work' and continued to prove their competency in the workplace. In July 1916 the list of processes done by Bolton women included acetylene welding, machining, grinding, foundry core making, lathe operation, boring and drilling, welding 9-inch trench bombs, crane operation, boiler work, turbine work, general labouring and just about all processes relating to explosives.

By 1918, 1,148,500 women were employed in jobs that directly replaced men. This figure relates only to direct male-female replacements and does not include the 1,536,000 women who worked on government munitions work, over half the total so employed. The demand for workers was so great that employers turned to children aged between 14 and 16 years to fill the vacancies. Over 590,000 extra children were employed

during the war of which most, 374,000, were girls.

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### 'Canaries' and TNT

For many Bolton women the war provided a golden opportunity to enter the exclusively male world of work with most earning far better wages. For the first time many were financially independent, freeing them at least temporarily from the budgetary control of men. This in turn meant new social, cultural and employment prospects and a new-found confidence, though often the harsh reality was an endless grind of bed and work. It also provided women with a chance to support their fighting menfolk by doing their bit: *"We must face our share, for after all, we are better off than yon lads in France or in the Dardanelles."* By 1919 the position of working Bolton women declined once again as the town tried to return to the pre-war norm but the position of women would never be the same again.

Although women benefitted from munitions and war work, not least in terms of wages, the work was hard, tiring and often very dangerous. In government owned or controlled factories or in large, established, private concerns there was a serious government-sponsored attempt to address welfare issues. This was not done for 'progressive' reasons but to maintain and enhance output efficiency. Welfare inspectors and supervisors monitored all aspects of welfare within the factory and a Factory Medical Service was established with medical officers attached to individual factories. Apart from the general dangers faced, women munition workers also faced the hazard of handling chemicals and explosives.

Before 1916 the standard explosive shell filling was 'Lyddite', a form of processed picric acid familiar to many workers as a dye used widely in the textile industry. Within a few days of working with Lyddite the skin and hair of women workers would turn bright yellow, earning them the nickname 'canaries'. Although alarming it was not dangerous, but that changed with the introduction of TNT filling, a substance that caused a range of conditions that could lead to severe and chronic illness or even death. As TNT was



### ● *Women working with dangerous chemicals in an explosives factory.*

phased in during 1916 it was estimated that 50,000 workers were at risk from exposure. The government responded by forming a special 'TNT Committee' and imposed a strict set of regulations in December 1916. These measures included alternating jobs, canteens and free milk, work clothes and laundry facilities and the appointment of both a full-time medical officer and a women welfare worker. The result was a 400 per cent drop in cases. Accompanying this was a comprehensive 'out of factory' welfare programme, which included provision for recreation, works-sponsored clubs, societies and outings, inspection of housing and hostels, general medical care, transport and the provision of crèches for young

children and regulations limiting the number of working hours and a guarantee of Sundays off.

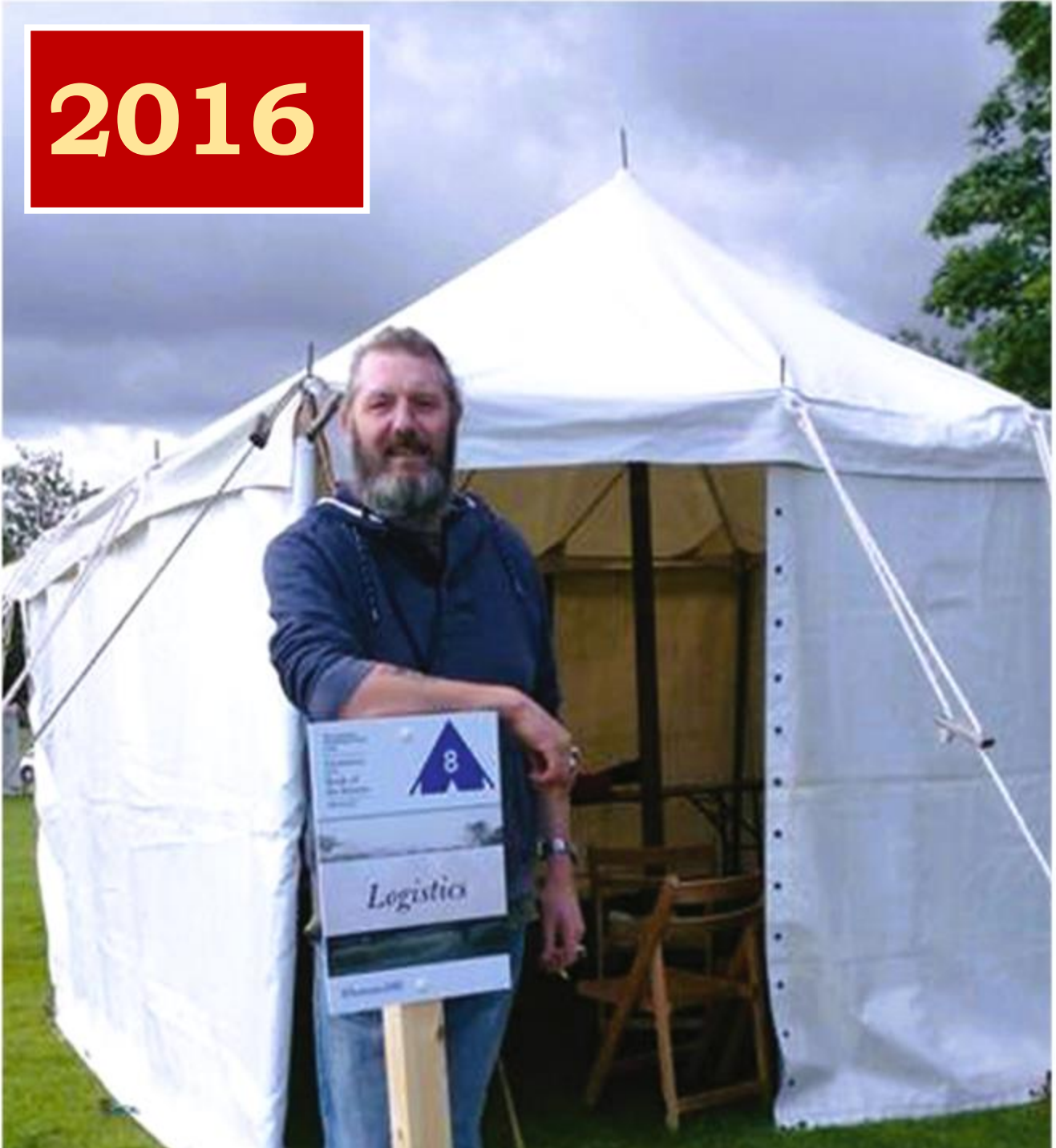
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### Conclusion

The author is aware of what has not been covered in this article: the development of small and medium-sized firms; the tension between the very liberal values that Britain was fighting for and the need for draconian control to secure fighting men and produce goods; the Defence of the Realm Act, and the provisions made for conscientious objectors; the sheer range of materials required beyond shells and guns such as Hodgkinson Bennis's self-cleaning furnaces (vital for all aspects of war production) and Thomas Fattorini's millions of badges needed for the armed forces and to identify civilians engaged in vital war work. Across the Channel an effort of similar magnitude was required to construct, staff, manage and maintain the vast and intricate infrastructure required to sustain the British armies at the front and the voracious appetite of war. To do justice to these elements of 'Somme Preparation' would require many volumes.

In August 1915 as plans for what would become the Somme began to crystallise, the Bethlehem Steel Company of America cabled its British agent in response to an order for 200 9.2" howitzers to be produced in 200 days, delivery to be expedited by 30 June 1916. The response was they would *"undertake anything humanly possible"*. Their agent replied: *"In these times our friends expect from you the superhumanly possible."* That is what Britain needed from its people and when the whistles blew on the morning of 1 July 1916 that was what its people had delivered.

# 2016



● As part of national activities arranged to mark the centenary of the First World War, Rob Thompson played a key role as an advisor (and representative of The WFA) to the Department of Culture, Media and Sport - helping to determine a programme of educational activities to mark this historic period in a fitting way. We particularly enjoyed his report on his work in Manchester to mark the centenary of the Battle of the Somme, including a stint in bell tents at the 'experience field' (pictured) at a very rainy Heaton Park in North Manchester (training ground for the Manchester Pals). The following extract is typical of the man, filled with humour and a twinkle in the eye. You know he loved every minute of it...

“‘Well, yes, and here we go again’ was a familiar thought by the third week of June 2016 as I stood outside yet another community hall in Manchester’s omnipresent rain ready to give my fifth Somme talk of the day (the thirteenth that week) to a Brownie pack. Deep breath, big smile and... ‘Hi! My name’s Rob Thompson and I’m here to talk to you about a very important event that took place 100 years ago...’”

***The German withdrawal to the Hindenburg Line, 14 March to 5 April 1917, is something of a footnote in the study of Great War military operations, yet the engineering and logistic lessons were to prove of crucial importance to the success of the BEF mobile operations in 1918 - representing the BEF's only experience of a mobile pursuit against an enemy retiring to temporary prepared positions defended by machine guns and a 'scorched earth' policy. The experiences of 1917 would prove very similar to those that the BEF faced in the latter half of 1918, and if the logistic and engineering changes of 1915-1916 represented the BEF's first logistical 'learning curve' then the experience and lessons of the German withdrawal represented the beginnings of a second one that prepared the BEF for mobile operations.***

Carefully planned and executed, the German retreat consisted of successive withdrawals to pre-planned temporary defensive lines predominantly using machine guns for defense. In addition to this, the Germans annihilated the area of withdrawal: villages were flattened, wells poisoned, rail lines destroyed, roads mined, key bridges (especially those crossing the Somme) were thoroughly wrecked and every dugout and pill box sown with booby-traps designed to catch out the unwary souvenir-hungry soldier. The effect was to create a devastated zone that offered absolutely no possibility of succor to the advancing British - a situation made much worse by the fact that the BEF - in this case mostly the Fifth Army under Gough - was also advancing over the

# Dealing with devastation...

**1917**

shell-battered 1916 Somme battlefields.

The pre-war BEF was designed as a mobile force and during 1914 the transport and supply organisation stood the test reasonably well. The same cannot be said when the BEF undertook mobile operations in March 1917. Despite the use of forward patrols and mobile columns the progress of the BEF was painfully slow. Some of the caution displayed was due to the fact that the BEF did not know if the German withdrawal was permanent or whether it presaged some form of counterattack to be launched when the pursuing BEF was at its most vulnerable. Conversely, Gough was under a great deal of pressure to get forward quickly in order to conform to the proposed Arras assault. In practice it was not the dual pressures facing Gough that dictated the pace of advance but the state of communications and the subsequent problem of supply.

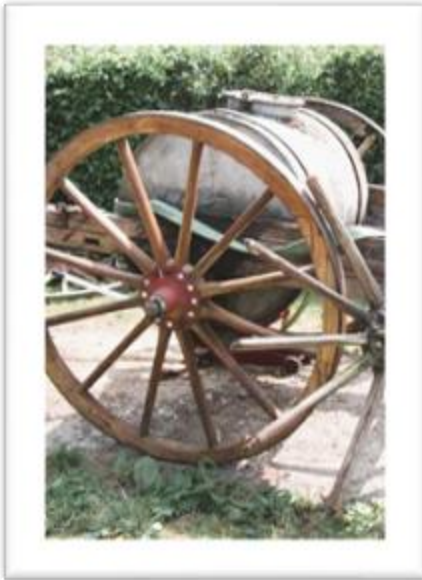
On 16 March 1917 Gough noted that *"roads in the shelled area have practically ceased to exist"* and added *"practically every*

*round of field artillery ammunition has had to be carried up by pack horse"*. By 23 March troops had outpaced their lines of supply and Gough was forced to *"delay further operations until the guns and ammunition necessary for a further advance could be brought forward"*. At the 'sharp end' the problem was all too apparent. The 56<sup>th</sup> Division War Diary commented that even the provision of something as routine as brigade supply and ammunition dumps for a proposed attack by 167<sup>th</sup> Brigade would be *"a difficult matter to deal with unless horse transport can be guaranteed. The tramline is at present a myth being buried 3ft in mud. The track along HOPE STREET is now non-existent"*.

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Water was also a major problem, and in the 2<sup>nd</sup> Division advance no water points were available, instead 500 tins were sent up to be guarded and issued *"sparingly"* by the brigade in the line. While any notion that the BEF could effectively pursue and exploit the retirement rapidly disappeared in the face of such supply and engineering realities, the longer-term response of the BEF to those realities provided the basis for the successes of 1918 when the BEF faced a very similar situation. Static warfare allowed for the development of a





stable transport system and predictable supply, effectively civilian circumstances that favoured a civilian approach based upon scientific management and statistical prediction. This is reflected in the controversial appointment of civilian railway supremo Sir Eric Geddes as Director General of Transportation [DGT] who was effectively given an independent command freeing him from military 'interference' and who centralised transportation to achieve efficiency.

In 1918 it was clear that mobile warfare eliminated stability and predictability and that transport and supply must now conform to an unpredictable dynamic military situation, the antithesis of the Geddes approach. Consequently, the transportation system was 're-militarised' and decentralised under the command of the Quartermaster-General from whom it had been taken in 1916. The necessity for the decentralisation of transport during mobile warfare was first realised in 1917 during the German retirement. Neil Malcolm, Gough's Fifth Army MGS wrote in March 1917: *"The experience gained in the withdrawal has convinced me that the present organisation of the transportation department is*



● **Key infrastructure, such as railways, was destroyed by the Germans on their retreat (above), whilst water supplies could be limited and natural sources all too often poisoned by the enemy, placing a heavy burden on the humble army service water carts (top left).**

*not altogether suitable to our requirements, especially in moving warfare."* The document goes on to outline examples of the inflexibility of the system, especially with regard to light railways. It recommended a degree of decentralisation of transport command and control [C2] to the level of corps and divisions in order to achieve the flexible and responsive system required under the changed circumstances. In August 1918 the same system, now a definite

'policy', was implemented with great success by QMG Travers Clarke for the same reasons.'

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On a more prosaic level was the question of water supply and bridging techniques and organization, both of which were crucial to the advance across the Somme region in 1917 and again in 1918. During the period of static warfare water supply had become an issue of predictability

● *The infamous sign that met British troops on entry to Peronne in 1917. The Germans left the sign embedded in the ruins of the town hall as they retreated to the Hindenberg Line. It translates as 'Don't rage, only wonder!'*



and the BEF responded by creating a vast network of mains piped water to definite watering points supplemented by water filtration barges located on the major rivers and lakes run by the Directorate of Inland Waterways

Transport (IWT). Limited assault gains made the forward extension of this system a relatively simple affair. Similarly, there was little need to address bridging except in relation to maintenance and the

construction of heavier bridges to deal with heavier guns and traffic behind the line. Mobile warfare in 1917 removed this predictability and provided the BEF with valuable lessons that were quietly codified throughout

1917 and successfully implemented in 1918.



The issues of bridging and water are closely related to the unique geology of the Somme: one that had an intimate and profound effect upon the conduct of military operations and their concomitant logistic and engineering support.

The Somme consists broadly of two features, each with its own geological and geographical peculiarities. The uplands, an arid area of gently rolling hills and shallow valleys, and the broad river valleys that bisect the uplands (such as the River Somme) that are generally well-watered and marshy. The former brings the problem of lack of water, the latter the question of crossing powerful natural defensive barriers.

When the BEF began the process of reoccupation in 1917 they entered an arid zone and the destruction and poisoning of the few existing wells by the retiring Germans compounded the problem of providing water not only for men and animals, but also for water-hungry locomotives that would use the newly constructed rail lines in the rear as the advance continued. Initial supply consisted of extemporisation by the use of water tins, horse or mechanical water tankers and windlass and bucket for those few wells that could be put into order. (Similar measures were used again in 1918 during the initial phase of the advance on 8 August.) During 1917 as the following corps and army troops occupied the area more substantial development consisting of five deep boreholes was undertaken using the latest pump and air compressor

technology. The result was a steady supply of 400,000 gallons per day during March and April. It must be noted that during the preparations for the Somme in 1916 the Royal Engineers [RE], assuming a breakthrough and the resumption of mobility, had considered the problem of moving across the arid areas and had planned accordingly. The result was a memorandum on water supply that covered among other things the use of fixed and mobile pumping stations, location and tabulation of all known wells, the provision of additional water carts to corps and sterilisation assets and techniques. The memorandum became *“a pattern for all subsequent water supply for military operations in France”*.

**“The successful and rapid crossing of the numerous rivers that bisected the mobile battlefield was clearly critical to maintaining the advance.”**

During the Battle of Amiens in 1918 the Germans were unable to undertake the same extensive devastation seen in 1917 and the five previously mentioned boreholes were successfully recovered. These proved to be critical to maintaining the advance through the arid ‘zone’: *“... the situation was saved by the recovery of the British boreholes put down in this area in 1917.”*

Boreholes using air compressor plant took on average six or seven days to complete but once completed provided ‘copious supplies of water’. Without these it is unlikely that the advancing force of 600,000 men and 300,000 horses could have been

supplied exclusively by water cart necessitating a potentially disastrous pause in the advance.



The experience of 1917 also had ramifications for water supply C2 when it became clear that the existing system required both expansion and reorganisation. In March 1917 three water boring sections were formed, later increased to five, attached to specialised Electrical and Mechanical [E&M] companies. In June of 1918 an inspector was added to the staff of the Engineer-in-Chief thereby ensuring representation at General Headquarters (GHQ). Water Supply Officers were installed at divisional and corps level to ensure timely development of supplies. By August 1918 responsibility for water supply had largely devolved from army to corps with the Corps Water Supply Officer effectively in charge of development supported by engineer army troops and E&M companies. Very quickly this was expanded further into ‘Water Supply Groups’. Interestingly this is consistent with the general C2 devolvement from army to corps level seen throughout the BEF. It was largely thanks to these changes, stimulated for the most part by the experience of 1917, that the Fourth Army in 1918 was able to make such rapid progress.

Water supply failure in the mobile battle would have halted the BEF in both 1917 and 1918. The natural barriers formed by water courses the BEF faced could have equally disastrous consequences. The successful and rapid crossing of numerous rivers that bisected the mobile battlefield was clearly critical to maintaining the advance.

While the RE were responsible for many large-scale surveys and public works programmes around the world, RE military bridging techniques were forged out of the experience of colonial campaigning in diverse territories far from home while providing direct support for the infantry. Consequently, the primary focus was on the provision of bridges for 'colonial police' foot soldiers and light artillery improvising with whatever local materials were to hand. As the war unfolded technological development produced ever-larger artillery calibres, tanks and other heavy classes of goods and transport none of which the RE was experienced in providing the bridging capability for. Conversely the RE experience of heavy railway bridging was the construction of permanent structures while the exigencies of modern warfare required rapidly constructed semi-permanent structures to be built. The RE entered the war with an excellent system of bridging that was singularly unsuited to the task it faced. The 'learning curve' faced by the RE would be steep but one that the RE would surmount thanks to some prescient thinking by Canadian railway construction engineers and the stern test of the 1917 withdrawal.

On 9 October 1914 a Mr A MacDougall submitted a memorandum together with a letter sent to Canadian Prime Minister Robert Borden suggesting the formation of a contingent of Canadian railway

**“Canadian Troops gave vivid accounts of just how close to the front of the advancing army they were working: on 2 September 1918, for example, the battalion was filling a mine crater when they were shelled by German artillery.”**

construction engineers. His perceptive reasoning was that the BEF needed to maintain speedy and reliable railways to supply troops at some distance from their bases. During the mobile pursuit *'The Germans will have totally destroyed every bridge and culvert, as well as long sections of [railway] road bed when they retreat'*. MacDougall then went on to note that Canadian railway construction engineers had the specific skills necessary to deal with this: *"In no country in the world can semi-permanent railway structures be built with greater speed than in Canada. This is the result of experience gained in building thousands of miles of railway with the most efficient and modern machinery. The European Engineers had had very little experience in this class of work, due to the practice in Europe being to always build permanent structures."*

The Secretary of State and the Army Council declined the offer but as the war expanded rapidly pragmatic considerations overtook these objections and the first contingent of the Canadian Overseas Railway Construction Corps arrived in Belgium in August 1915. The 1917 German withdrawal demonstrated the forward thinking of MacDougall whose original idea blossomed into a Canadian railway force of nearly 16,000 men. In contrast Imperial RE railway engineers accounted for 5,312 all ranks. Reorganised into Railway Construction [RC] battalions under Lt.-Col. JW



Stewart (later Major-General) and equipped with modern equipment such as steam-driven shovels and pile-drivers they arrived with increasing rapidity. The 1<sup>st</sup> RC Battalion arrived in October 1916 with another four battalions arriving between 11 January and 22 March 1917, and the 6<sup>th</sup> RC Battalion arriving in April. The German retreat made their arrival most timely and they pushed forward the broad-gauge rail lines with *'... surprising rapidity in spite of the obstacles and difficulties imposed by atrocious weather and the thoroughness of the destruction left by the enemy in the wake of his retreat'*. By the early summer of 1918 further expansion took place, the whole now called the Corps of Canadian Railway Troops.

Thus, as the BEF was poised to undertake its advance it did so with an experienced and modern railway construction organisation ideally suited to the task. Throughout the advance of 1918 the *'... head of steel on the selected railways kept pace fairly well with the advance'*. The War Diary of the 1<sup>st</sup> Battalion, Canadian Troops gives a vivid account of just how close to the front of the advancing army they were working. On 2 September 1918 the battalion was filling a mine crater when they were shelled by German artillery,

● *The incredible level of destruction the Allies had to operate within are highlighted by this picture of Bapaume in March 1917. On the left is the cap badge of the Canadian Overseas Railway Construction Company.*





wounding three mules. They faced heavy shelling again on 3 September yet by 4 September they had filled the mine crater and laid over a mile of track on that day alone. By late-October progress was slowing due to lack of water, coal and the effect of German delay-action mines as the combined effects of these delaying tactics and shortages of essential supplies caused by the general over-extension of the BEF began to make themselves felt.

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The problem of dealing with heavy (road) bridging sufficient to carry large guns, tanks and most importantly, Mechanical Transport [MT], was solved by a combination of standardised technology and the

● ***Trees blocking roads was a minor inconvenience for the advancing troops (above) when compared to the challenge of filling in large craters (opposite page).***

reorganisation of bridging C2. Again, it was the experience of the 1917 German retreat that occasioned the primary stimulus.

For a military force reliant upon weight of artillery firepower supplied through a 'broad-gauge railway and MT' policy the issue of rapid bridge construction and repair was central to maintaining the advance. This was the first time the BEF had faced this difficulty. The rapid withdrawal of the Germans and the commensurate destruction of vital bridges posed an enormous problem for the pursuing armies. When the Fourth Army reached

the Somme on 17 March it found every bridge across the Somme and its principal tributaries destroyed. Although work was immediately put in hand it took a frustrating ten days for the bridges to be reconstructed sufficient for the passage of heavy traffic, the key element in maintaining the advance.

On the Fourth Army front six bridges were constructed on one causeway alone at Brie, this constituting '... *our first experience of heavy bridging on a large scale*'. Clearly in any future advance this issue had to be addressed. Even as the advance



took place lessons were being learned and solutions implemented culminating with the publication in late 1917 of a widely-distributed official document *'The Organisation of Bridging Work'*. The first lesson was one of bridging C2. Prior to the experience of the 1917 advance bridging was almost exclusively an army-level concern, consistent with the scale and immobility of the front. As the BEF advanced the armies fell behind and pragmatism demanded that the locus of command and control decision be moved from army to corps and divisions.

In March 1917 IV Corps allowed their divisions much greater latitude in deciding the routes and positions of bridges they proposed to use. By summer

1918 bridging was by and large a definite corps concern with army dispatching materials as needed because *'...corps were so far ahead of Army that control of bridging and the necessary materials, normally exercised by the latter was devolved to the former, under the supervision of the Corps Bridging Officer'*.



Corps was now responsible for coordinating the use of army bridging assets and for all permanent and heavy natures of bridging with divisions responsible for all other bridging up to 11,000 lbs. By 1918 there was bridging representation at every level of the BEF from GHQ to divisional. Furthermore, training was taken seriously as evidenced by the creation of

bridging schools in both Britain and France, the latter eventually training 400 officers and 2,000 men. The very best of those that passed out went on to form 'specialised' bridging companies, one example being the 216<sup>th</sup> Army Troops Company, which became a specific bridging company in January 1918.

The final 'piece' in the jigsaw of bridging development was due to the work of two engineers, Professor Sir Charles Edward Inglis and Captain Hopkins who became GHQ Bridging Officer. Both these brilliant men designed standardised, lightweight, reusable bridges made from steel girders or poles that could be erected and dismantled far faster than traditional bridge designs. Inglis bridges were used for lighter

traffic though heavier versions were developed and Hopkins bridges were used for heavier traffic up to a weight of about 35 tons, or the weight of a tank. The key to their success was standardisation and its resultant simplicity. Anticipating the concept of 'flat-pack' unitary construction by years the Inglis and Hopkins bridges were constructed using standardised sub-assemblies and a minimum number of bolt sizes to simplify and speed up construction. The individual parts and sub-assemblies themselves were specifically designed for handling and transportation for the transport in use - making them relatively easy to move, assemble and disassemble and reducing delays resulting from the absence of 'custom' parts or specialist engineering. Hopkins and Inglis bridges were 'mobile' bridges placed only temporarily. They were built and dismantled in succession to maximise economy of materials and men.

During the initial part of the advance lighter bridges for foot soldiers, regimental transport and field guns were necessary. As the bulk of the army moved forward these bridges were dismantled, packed and moved forward again for re-use while heavier natures of bridge were brought up to replace them. In turn these too were dismantled and moved forward to be replaced by even heavier bridges capable of handling tanks and siege artillery. Simultaneously permanent or semi-permanent bridges were built allowing the even heaviest classes of bridge to move forward in turn. The difference this made during the advance was remarkable as a comparison of bridging at Brie in 1917 and 1918 demonstrates: in 1917 it took Fourth Army ten days to erect six bridges, but in September 1918 the "first spans

*were delivered at the sites on the 6<sup>th</sup>, and all five bridges were completed and open for all traffic on the 9<sup>th</sup>."* In just three days five bridges sufficient to handle any vehicle class were constructed. At Peronne, engineering reconnaissance began on 2 September, construction of temporary bridges sufficient to handle MT began on 4 September and was complete by 5 September. Three semi-permanent bridges started on 10 September were completed by 16 September. In the Third Army advance a 120 ft span Hopkins Bridge, the longest erected during the 1918 advance, was completed in a mere five days.

**“During the Advance to Victory in 1918 it was once again MT that provided the essential bridge between the rapidly receding railheads and the forward troops.”**

Stimulated by the practical challenge of the 1917 German withdrawal the BEF responded rapidly. Via a combination of C2 reorganisation, greater priority, dissemination of techniques, training and technology, the BEF was ready for the challenges of 1918 and the 'Advance to Victory' not stalled for want of bridging.

MT was both the boon and bane of the BEF. MT (principally lorries) was flexible; very load efficient compared with horse transport; had longer-range distribution and supply capacity and required far less manpower per ton-load than the alternatives. MT also required specialist mechanical support and workshop facilities, complex organisation, depots, complicated parts administration

and parking facilities. In practice the convoluted 'corralling' of MT into useful convoys also meant that they ran without load far more often than with load, thus reducing their high capacity load effectiveness. Above all they destroyed roads both because of the poor quality of French roads and because of their weight and mass use. It was this destruction and the consequent increase in the demand for road repair material that prompted the use of light railways and led to a 'broad gauge and light railways policy' from late-1916. Nevertheless, the utility of MT coupled with the expansion of the BEF saw its use rise year on year despite attempts to limit usage: in November 1916 the number of 3-ton and 30 cwt lorries stood at 18,561; by April 1917 the figure was 21,969 increasing to 25,597 by October and rising again to 26,809 by the armistice. The utility of MT was proven whenever there was an advance or when the light railways ceased to function.

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MT once again provided the essential bridge between the rapidly receding railheads and the forward troops during the Advance to Victory in 1918. A glance at the figures for MT expansion demonstrates that between 1917 and 1918 the relative increase in the amount of MT was considerably slowed compared with previous years. Yet in 1918 MT faced its sternest test and greatest use begging the question of how this was achieved without a dramatic expansion in MT numbers in 1918, as had been the case in 1916 and 1917? The answer lay in the quiet reorganisation of MT throughout 1917 and early 1918 as a 'precaution against possible railway breakdowns' and also the cumulative experiences



● *This 108-foot replica of a First World War Inglis bridge was built as an experiment in Lostock in Lancashire by members of the Army Service Corp – and took them just 13 minutes to complete with no prior experience of the process.*



of 1916. MT was reorganised on a corps basis and ‘pooled’ rather than exclusively allocated to a specialised task, unit or formation. GHQ also withdrew as much MT as possible in order to form a reserve and, together with broad gauge railways, this allowed the QMG to implement a ‘broad gauge and MT policy’ during the advance in 1918 - thereby returning the BEF back to its original pre-1914 concept of a highly mobile force capable of operating up to thirty miles in advance of the railhead.

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‘Pooling’ was a response to the increased scale of operations and had occurred in just about every branch, formation or unit in the BEF whether officially sanctioned or not. The withdrawal of artillery from divisions in 1916-1917 and its centralisation at corps level was a response to the increasing scale of operations. It prevented the piecemeal use of guns by individual divisions functioning at the tactical level in favour of more efficient ‘task-orientated’ deployment at the operational level. In the case of MT reorganisation, pooling was a response to the same stimuli and inspired by the French use of MT, especially during the Battle of Verdun which was almost wholly supplied by MT. It also allowed significant economies of MT and personnel as *“pooled vehicles, if scientifically used, produced a greater output of work per vehicle than in the case of those affiliated exclusively to units”*.

The reorganisation had two objectives: centralisation of MT at corps level and formation of an MT reserve. The achievement of the latter allowed attainment of the former. Furthermore, divisional supply columns and ammunition sub-parks were

amalgamated to form divisional MT companies. Similarly, corps supply columns and parks became corps MT columns, while at the army level supply columns (already motorised) were given an additional auxiliary MT company and designated army troops MT companies. Finally, corps troops supply columns (as distinct from corps supply columns) became corps troops MT companies. Seven separate organisations were thus amalgamated into four.

**“In common with the rest of the BEF the logistic and engineering service was a learning organisation that assimilated, studied lessons and altered itself accordingly.”**

In the Canadian Corps the reorganisation order was given on 27 September 1917 but not complete until 14 April 1918. This rationalisation was given extra impetus by the adoption of a ‘universal’ establishment with a ‘standard’ section at its heart. A section consisted of sixteen lorries of which fifteen were working lorries with one spare to *“allow for periodical overhaul”*. Any given MT company consisted of a headquarters and a variable number of standard sections. The reorganisation resulted in a considerable number of vehicles being withdrawn from service. Some of these were retained as replacements but the bulk sent to GHQ to form GHQ Reserve MT Companies. Commensurate with these changes MT C2 was also altered with the appointment of a ‘Senior MT Officer’ (SMTO) at corps headquarters: a role also responsible for making sure that MT companies were not misused by corps staff. The benefits and administrative flexibility of this

system are clear in practice – for example, on 17 April 1918 the Canadian Corps MT Column had attached to it the 2<sup>nd</sup> [Imperial] Division artillery and four Army Field Artillery [AFA] brigades. Normally attached units caused a good deal of administrative problems but the reorganisation meant the Canadian Corps SMTO simply took on the additional MT transport of these units and integrated it into his own without need to refer to the formations from which they were detached.

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[As will be discussed in a subsequent item], the changes made to BEF engineering and logistical practice that proved so vital to the Advance to Victory in 1918 were to great extent the product of the BEF experience of the 1917 German withdrawal. In common with the rest of the BEF the logistic and engineering service was a learning organisation that assimilated, studied lessons and altered itself accordingly. It attempted to integrate various operational elements into a whole that was more than the sum of its parts. It changed its organisational and administrative C2 in response to experience, centralising or decentralising as necessary. Like the rest of the BEF the focus of C2 moved both upwards and downwards to corps; corps level being the most operationally apposite level. Throughout 1917 it found itself returning to the pre-war principles enshrined in FSR (1912) in order to provide mobility in 1918.

**Note: When this article was first supplied to the WFA for publication some years ago it included references which were excluded due to space limitations, and which have since been lost to posterity.**

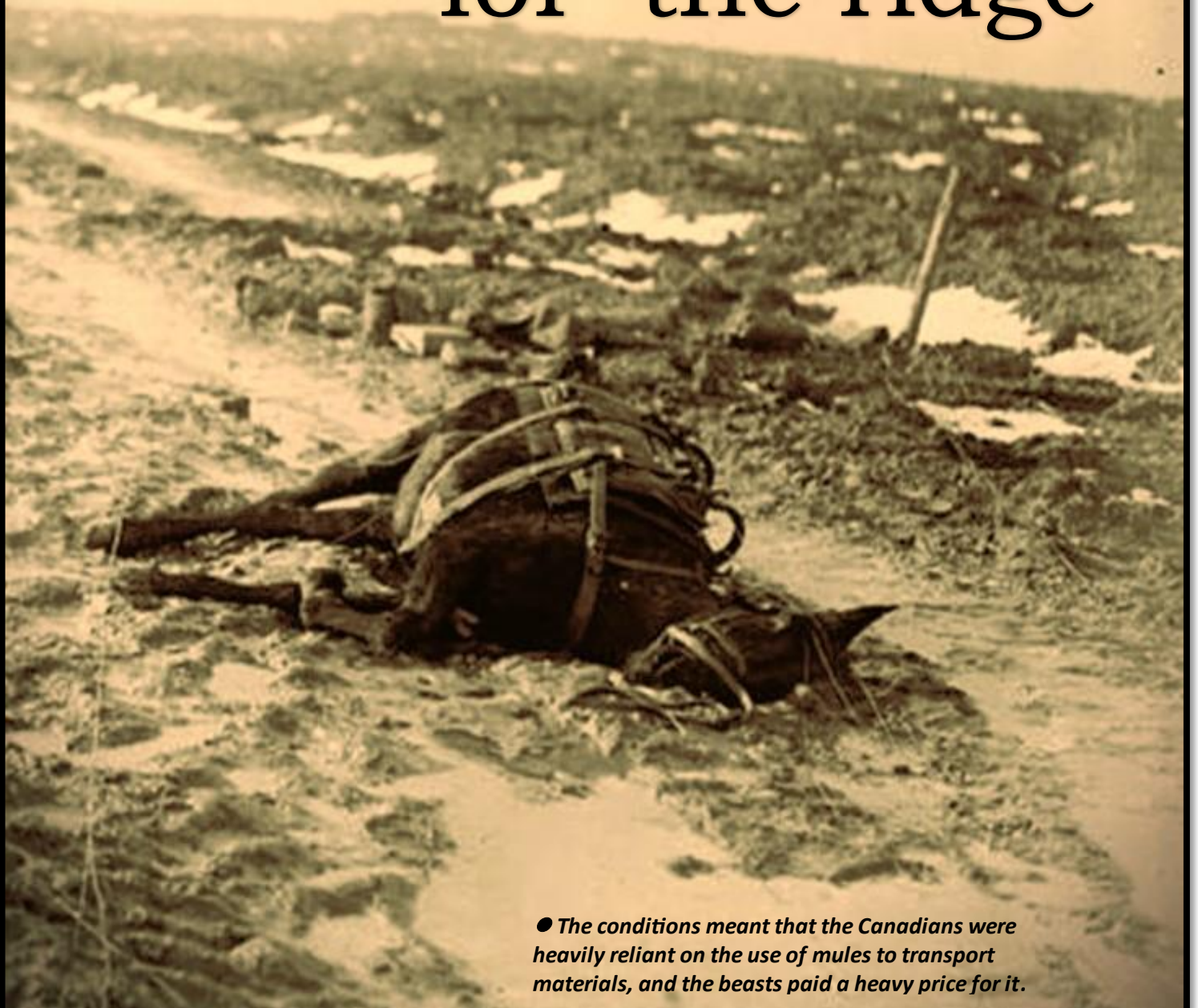
## PREPARATION IS EVERYTHING... by Rob

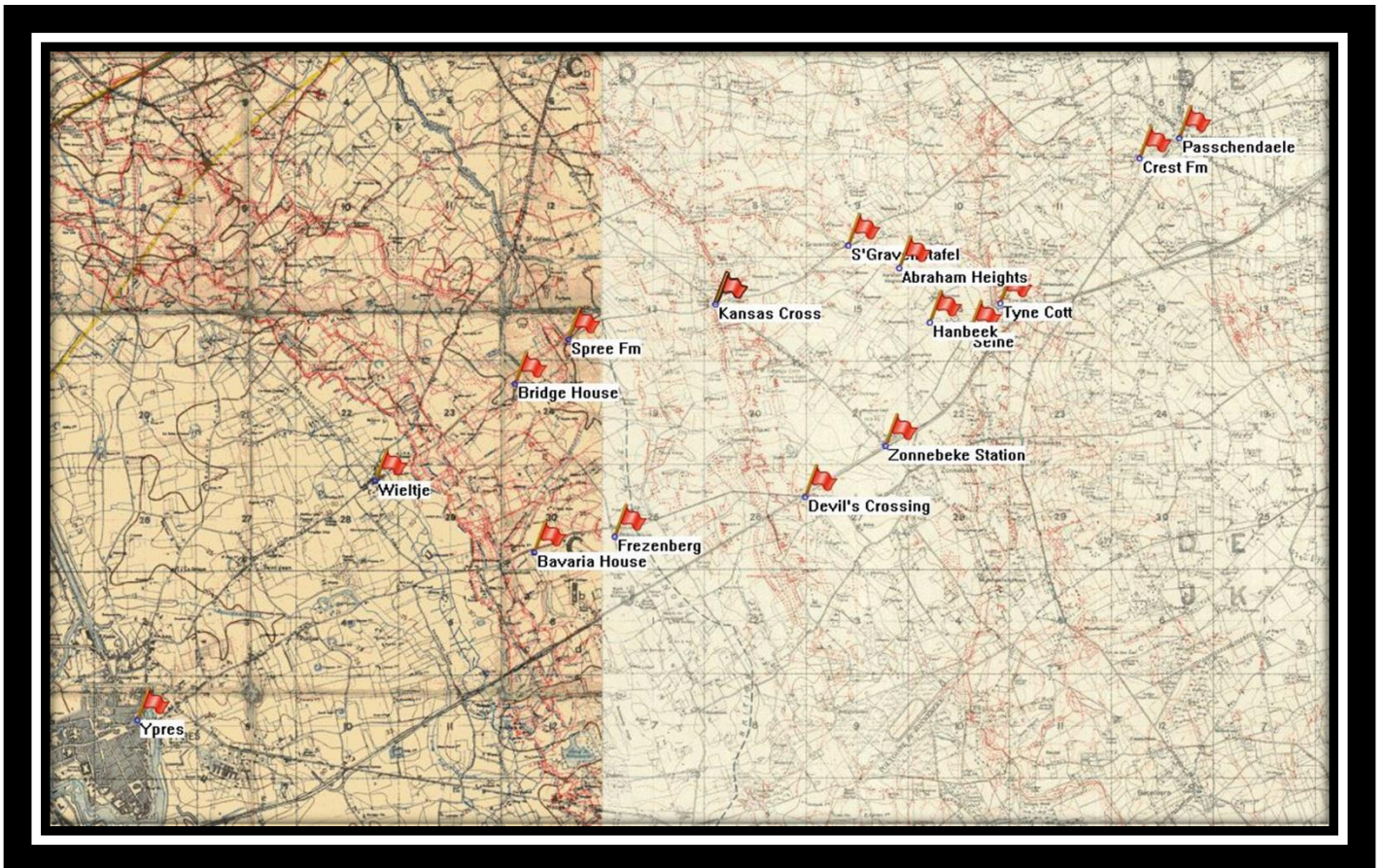
*If Vimy Ridge established Canada as a nation whose military was the equal of the world's best, then its attacks on Passchendaele and its infamous ridge enhanced its reputation as the 'shock army'.<sup>(1)</sup>*

1917

# Canadians' careful plans for 'the ridge'

● *The conditions meant that the Canadians were heavily reliant on the use of mules to transport materials, and the beasts paid a heavy price for it.*





● *A map showing the road-building programme instigated by the Canadians in readiness to make good their attack on the Passchendaele ridge.*

### Third Ypres: Situation report, October 1917:

The idea of a major assault in the Ypres area had been around in one form or another since 1914. By 1917 it had matured into a two-stage plan designed to envelop the German forces in Flanders: a major assault north-east out of Ypres to take the Passchendaele-Staden Ridge and cut the two main German supply rail lines east of the ridge followed by assaults from the coast. The plan held much strategic promise and even the possibility of creating a flank which the allies could attack.

Despite its strategic promise there had been problems. General Gough's Fifth Army attacks throughout August had been slow, hampered by bad weather and suffered from increasing German artillery fire

from Gheluvelt smashing into his right flank. In late-August General Plumer's Second Army took over the bulk of operations and after a pause to reorganise launched a series of limited, high-tempo, artillery-centred 'step-by-step' operations. Attacks on 20 and 26 September suppressed the German artillery and steadily drove the enemy back.<sup>(2)</sup> After crushing the Germans at Broodseinde on 4 October it appeared the BEF had found an 'unstoppable' operational method and plans were made to exploit success and break through beyond the ridge.

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However, all was not well - the apparent success of Plumer's battles masked a steadily collapsing logistical system that ceased to function after Broodseinde and consequently the two ill-supported follow-up

operations on 9 and 12 October were unmitigated disasters.<sup>(3)</sup> These failures were to end any chance of strategic victory and it was clear the troops could not survive in their perilously exposed positions at the foot of the ridge and so the ridge *must* be taken.<sup>(4)</sup> The troops already in the sector were too exhausted to take on the task so Haig turned to one of the few formations that had not been through the Ypres mill: the Canadian Corps.<sup>(5)</sup>

The Canadian Corps was a very different beast, consisting of the same four Canadian divisions and thereby creating a stable, permanent, integrated and homogenous 'operational battle' formation that was to all intents and purposes a small national army. The Canadian Corps was also very, very big: at 20,000-strong its divisions were larger and had (in practice) significantly more battle support assets.<sup>(6)</sup>

Furthermore the Canadians kept their establishments up to strength (often considerably overstrength) unlike their counterparts who rarely mustered anything like their authorised numbers. They also had the advantage of a more devolved, flexible command-structure and were able to build lasting relationships and [as highlighted in the preceding article] implement corps-wide 'standard operating procedures'. Although not independent they had political clout allowing them a greater degree of latitude in planning and executing operations.

From April to October 1917 the Canadians were in the First Army area and (with the exception of the successful Battle of Hill 70 in August) not committed to any serious operations. Instead, they spent their time training and

**“In addition to Canadians, just about every able-bodied man in the area who could possibly be spared was called upon to provide labour to support the push.”**

refining their tactical and operational methods at the heart of which was “killing by artillery”.<sup>(7)</sup>

When the Canadian Corps first arrived in the Salient their shock was palpable, as the 'Canadian Corps Artillery Report on Passchendaele Operations' makes clear.<sup>(8)</sup> Maj.-Gen. EWB Morrison, the Canadian Corps General Officer Commanding Royal Artillery [GOCRA], noted the “*general state of the country, and the rate of repair of existing communications... had led to a considerable disorganization of the artillery dispositions*”.<sup>(9)</sup> There were further shocks in

store: on 16 October Morrison made a personal reconnaissance of the area and of the 250 heavy guns left by II ANZAC Corps he could only locate 227 of which 89 were out of action. There were forty-eight 60 pdr guns on his list but only seventeen were in action and only six out of twenty-six 9.2 inch howitzers. With less than half of the 306 18 pdr guns in action field artillery was in an equally bad state.<sup>(10)</sup>

Since artillery firepower lay at the heart of BEF and Canadian operational methods, getting the guns into proper positions where they could be adequately supplied was crucial to success. Achieving that depended entirely upon the rate and quality of communications construction: “*Speaking generally the whole artillery situation was dependent on communications: until such time as roads and light railways*

*were developed it was impossible to support further operations or obtain a proper percentage of power from the artillery available.*”<sup>(11)</sup> Light railways, the preferred method of moving heavy ammunition, had effectively ceased to function, petering out some four-to-five miles behind the battery lines. There were only two roads capable of handling lorries (the main means of carriage of heavy ammunition and the crucial engineering materials needed to construct forward roads in the absence of any functioning light railways) all of which were in poor condition, hideously gridlocked, constantly shelled

and ended some two miles or so from the batteries.<sup>(12)</sup> To compound matters further there were no complete lateral connecting roads, greatly complicating the business of supply and movement.

Clearly the first and overriding order of business was to push the roads forward to redistribute batteries more effectively and create an adequate ammunition supply system. To serve the gunners' needs would require the best efforts of the Canadian sappers, who were under the command of WB Lindsay.

□□□□

Lindsay concentrated his efforts on three main routes: Zonnebeke Road, the main southern artery running from Frezenberg to Devil's Crossing approximately 1,000 yards south-west of Zonnebeke; Panet Road, the main northern route consisting of a newly-built plank road running from Spree Farm to Kansas Cross approximately 1,500 yards south-west of 'S Gravenstafel and Godley Road, a lateral plank road that connected the southern and northern routes and ran from Bridge House to Bavaria House some 5,000 yards in the rear of the front line. (See facing map.)

On 17 October the epic construction task began. The workforce consisted of all available Canadian and Royal Engineers and pioneers, an average of ten field companies, seven tunnelling companies two (Canadian) infantry battalions and seven pioneer battalions - over 12,000 men per day. In addition to Canadian infantry just about every able-bodied man in the area who could possibly be spared was also called upon to provide labour.<sup>(13)</sup> The result of this effort? When the first attack began on 26 October not all the

guns were in position nor all the roads built, but enough had been done to provide the crucial artillery support upon which the operation depended. A series of phased Canadian attacks were finally able to secure the ridge on 10 November. More than 16,000 casualties were sustained as the Canadians crawled the last few thousand yards to the top of the ridge - but even as they stood in the ruins of Passchendaele the GHQ was already drawing up plans to abandon what was an impossible to defend salient that the Germans would overrun in days the following spring.

The Canadians were not qualitatively 'better' than their imperial or Australian counterparts except in one crucial respect: they understood that if artillery firepower defined operational success or failure then it was roads and rail that defined that firepower. In the minds of the Canadians Passchendaele confirmed absolutely that engineering was the *raison d'être* of modern battle. In his report the Chief Engineer recommended a radical overhaul of Canadian engineering and suggested that field companies be expanded into field battalions, an entire engineering brigade of 4,500 men for each of the Canadian divisions. In short, the creation of the equivalent of an engineering division for the corps. The Canadian Commander, Arthur Currie, took this proposal seriously and set about their creation despite protest from Haig and many others who were still infantry-focused and having to cut their establishments.

Currie's response was that he would rather do without infantry if it meant he could have engineers and in early-1918 Currie got his way. With so many engineers the Canadians did not



● *Sir Arthur Currie*

have to rely on inefficient infantry working parties leaving the infantry free to train and fight and could tackle any engineering problem no matter how large.

#### Notes

- (1) This perspective has been challenged by Peter Simkins who argues convincingly that Canadian divisions were no better or worse than their Imperial counterparts. See: Simkins, P, *Co-Stars or Supporting Cast? British Divisions in the 'Hundred Days', 1918* in Griffith, Paddy (Ed.) *'British Fighting Methods in the Great War'*, (Ilford, 1996), pp. 50-69.
- (2) Battle of Menin Road (20-25 September, 1917); Battle of Polygon Wood (26 September-3 October, 1917).
- (3) Battle of Poelcappelle (9 October, 1917); First Battle of Passchendaele (12 October, 1917).
- (4) The alternative - withdrawal - was militarily, politically and publicly unthinkable.
- (5) Ironically Haig originally selected the Canadian Corps for the role of primary exploitation force during the false dawn of early October.
- (6) Love, David W, 'A Call to Arms. The Organization and Administration of Canada's Military in World War One', (Calgary, 1999), pp. 19-32 and *passim*.

- (7) Nicholson, Col. GWL, 'Official History of the Canadian Army in the First World War. Canadian Expeditionary Force 1914 - 1919', (Ottawa, 1964), p. 287.
- (8) Libraries and Archives of Canada, [LAC], RG9, Militia and Defence, Series III-D-3, Volume 4957, File: 504, 'Canadian Corps Artillery Report on Passchendaele Operations, Oct. 17th to Nov. 18th, 1917'.
- (9) LAC, 'Canadian Corps Artillery Report on Passchendaele Operations', p. 1.
- (10) Nicholson, GWL, 'The Gunners of Canada. The History of the Royal Regiment of Canadian Artillery Volume I, 1534 - 1919', (Toronto, 1967), p. 305.
- (11) LAC, 'Canadian Corps Artillery Report on Passchendaele Operations', p. 1.
- (12) There was a third plank road (GODLEY Road) that could handle lorries but this was more of an attempt at a lateral diversion rather than a road proper. See: LAC, 'Canadian Corps Artillery Report on Passchendaele Operations', p. 1, and LAC, Canadian Chief Engineer 'Report on Passchendaele Operations 1-11-17 to 18-11-17', p. 1.
- (13) Quartermaster-General Erich von Ludendorff described the Canadian assaults as "*The enemy charged like a wild bull against the iron wall...*" See: Ludendorff, Erich von, 'Ludendorff's Own Story, August 1914 - November 1918. The Great War from the Siege of Liege to the Signing of the Armistice as Viewed from the Grand Headquarters of the German Army', (London, 1919), p. 106.

In 2020 Rob Thompson was presented with a WFA Hero Award for his contributions to the association over the course of many years...

The decision was made in respect of the fact that Rob had been a regular and valued speaker at keynote events such as the AGM and national conferences as well as at many local branches. In addition, it was noted that he had provided numerous thought-provoking articles for WFA publications (many of which are included in this digital magazine).

It was added that Rob's talks and articles were always meticulously researched, original and stimulating. Furthermore, he had more than proved himself as a fine ambassador for The WFA at a wide variety of official events to mark the centenary of the Great War - interacting with the public at The Somme Experience Field in 2016 at Manchester's Heaton Park and the Zonnebeke Experience Field in Belgium in 2017. A natural communicator, in addition to educating schoolchildren he had been involved in the official UK teacher education events for the centenary.

"Rob is one of the jewels in the crown of The WFA and his award is well deserved," it was stated in the *Bulletin*.

Upon Receiving his hero award for 'Outstanding Services to The Western Front Association', Rob commented: "I am both astonished and humbled to have received this award: astonished because I am gobsmacked that I have even been considered for such recognition, and humbled because there are so many more members who toil away unrecognised and who are far more deserving of this award than I.

# Hero award for stalwart of The WFA



*"Ultimately The WFA has given me far more in the way of opportunities and support than I could ever repay. I would like to thank The WFA for all they have done for me over the years as well as the service they have rendered as an organisation in keeping the flame of Great War education and learning brightly burning over the years.*

*"It has been a joy and a privilege to be involved and I'd like to thank all past and current members for this honour for which I am truly grateful."*

● **Rob on the map table doing his stuff at the Zonnebeke/ Passchendaele WFA tent in 2017, helping a visitor to locate a lost relative; and (right) with his hero award from the association to which he was so committed.**

## **SURVIVING A SPRING OFFENSIVE** by Rob

**1918**



● *German stormtroopers  
in action, Spring 1918.*

**Where and why  
did it all begin  
to unravel for  
the Germans?**



**At the close of 1917 both the Allies and Germans found themselves in new situations. The Allies were exhausted and counting on the arrival of the Americans to boost their fighting power. Subsequently the decision was made to move to a defensive posture until 1919. The Germans, fully aware that American manpower guaranteed an eventual Allied victory, had defeated the Russians and had a window of opportunity to move their troops westwards, inflict a serious defeat on the Allies and to gain a seat at a peace conference as an equal before the Americans arrived in strength. This was the impetus that drove the German Commander-in-Chief's decision to strike in March 1918...**

The German Spring Offensives, or *Kaiserschlacht*, loom large in the popular historical conception of the Great War. The perception is one of a superior German Army achieving in a matter of months what the Allies had failed to achieve over the preceding three and half years. It was a view crystallised in the title of William Moore's 1970 text 'See How They Ran', a damning indictment of Fifth Army's retreat during March 1918. This view was given extra credence by an overweening American post-war focus on German 'tactical brilliance' – one that had resulted in a British (and later French) rout. More recent and measured scholarship reveals a more nuanced story that recognises both Allied strengths and German weakness.

Despite the best efforts of Germany, the Allies maintained a coherent front while the Germans, bereft of any strategic plan and lacking an understanding of the operational level of war, threatened the Allies at some points but ultimately captured relatively unimportant territory at enormous and unsustainable cost.

As we have seen throughout these articles, the issue of logistics was always key to success or failure: the

movement, supply and maintenance of vast, complex forces in the field. The BEF had established strong logistical practices by 1918, but the German Spring Offensives heralded the return of mobile warfare. It was a situation that posed important questions: how would the BEF and Germans respond with respective supply systems developed within the immobile and thus 'predictable' logistical context of the Western Front? To what extent would they understand the central role

**‘Since the Somme sector of the British front constituted little more than valueless territory previously devastated by the Germans during their retirement in early-1917, it was assumed any attack against the BEF would take place north of Arras.’**

of logistics in modern warfare and how much would it inform their strategic and operational planning and execution? In short, how would they cope and what contribution did their tactics make to the outcome?

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To recap, the BEF supply chain was tremendously complex but basically consisted of men and matériel moving from port to base (the two usually co-located) and then on to a regulating station. Some supplies moved

direct from base to regulating station while others went via an Advanced Supply Depot. At the regulating station (vast railway marshalling yards) completed supply trains were made up and sent forward to a railhead. The railhead was located in the forward area and mechanical transport columns moved supplies to refilling points whereupon they were moved by horse transport to their respective units. Although the BEF was located on the northern sector of the front they used the

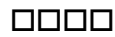
northern (Boulogne, Calais, Dunkirk) and southern French ports (Rouen, Le Havre). The latter were the BEF's main ports, so supplies tended to move south to north, though not exclusively, meaning

the vast majority of men and matériel had to move through the critical transport distribution nodal points of Amiens and Hazebrouck, 45 and 20 miles from the front lines of the Somme and Lys areas respectively. From the BEF perspective Amiens and Hazebrouck were vital and the loss of either would be catastrophic.

Senior BEF commanders were fully aware the Germans would strike, but where? From the British perspective the question

answered itself - wherever the Germans could achieve strategic success. Since the Somme sector of the British front constituted little more than undeveloped, valueless territory previously devastated by the Germans during their retirement in early-1917, it was assumed any attack against the BEF would take place north of Arras. If the enemy attacked between Hazebrouck and Ypres they could cut the BEF's supply line, capture the nearby northern ports and drive the British into the sea. This would be a strategic victory of the first order. Unsurprisingly the BEF focused its defensive programme in this area, leaving the Somme relatively under-resourced. While this was an entirely rational approach the BEF failed to understand the psychology of the enemy or its C-in-C, Erich von Ludendorff.

best summed up by Ludendorff's own words: *"I object to the word 'operations'. We'll just blow a hole in the middle. The rest will follow of its own accord."* This fallacious reasoning defined all subsequent planning and preparation. It also defined the point of attack: the Somme.<sup>(1)</sup>



The British defensive system was modelled on the German 'elastic' defence-in-depth system of miles-deep 'zones'.<sup>(2)</sup> These consisted of numerous, interlocking defended localities rather than rigid trench lines; the whole being designed to absorb and disperse the attackers prior to launching counter-attacks by troops held towards the rear of the zones. Although adopted, the BEF did not really understand how elastic defence worked,

multiple railheads arranged to maintain supply throughout the various phases of battle and they made their plans accordingly. Having said that, Fifth Army, which would sustain the brunt of the assault, was the lowest priority force and occupied an area that had lacked any significant pre-war transport infrastructure. It was a situation that had been worsened by both the 1916 Battle of the Somme and the German withdrawal in 1917. Subsequently it lacked the roads, railways and depth of railheads required.

As the saying goes, 'No plan ever survives first contact with the enemy', and the launch of Operation 'Michael' on 21 March 1918 against Third and (mainly) Fifth armies demonstrates the point. Although not a total surprise to senior BEF



Ludendorff disdained the strategic and operational level of war and favoured destroying the BEF through a tactical battle of annihilation before turning his attention to the French. This military concept saw the tactical battle as the 'be all and end all' that would lead to victory and is

leading to an incoherent and fragmented overall plan. However, to the BEF's credit it did understand the logistical implications: with a dynamic defensive system designed to cede ground BEF army, corps and divisional commanders understood this would require

commanders it did 'wrong-foot' them. The German use of a massive but very short bombardment followed by the use of deep-penetrating stormtroopers bypassing centres of resistance saw the BEF pushed back to the rear of their 'battle zone' by the end of the first

day.<sup>(3)</sup> This situation did not cause much concern in BEF logistical circles as everything was working as it should: the rear zone behind the armies was untroubled by the distant battle and supplies were being pushed forward to the railheads and beyond according to plan.<sup>(4)</sup>

The next few days changed everything, forcing both 'Q & A' (logistics and administration) and 'G' (operations and command) to respond rapidly to a fast-paced, dynamic situation. The German breakthrough pushed Fifth and Third armies back behind the defensive zone nullifying the careful planning of the logisticians who now had to respond to an entirely unforeseen situation... With the forward light and main-line railway systems rapidly captured or subjected to intense

stock, plant, engineering equipment and priority stores were evacuated in a blur of administrative and logistical action. That which could not be moved was, where possible, destroyed.

□□□□

Astonishing as it may seem, at no point did the retreating troops go short of supplies or ammunition. This was thanks to a combination of prudent 'standard practice', flexible logistical provision and pragmatic solutions on the part of administrators, formations and units. For the troops engaged at the cutting edge of the retreat their experienced battalion 'first-line' horsed transport kept pace. Dispatch riders were in constant use to maintain communications between units while orderlies

through their particular area. In addition, the practice of simply dumping supplies by the sides of roads, last seen during the Mons Retreat in 1914, was again used. Supplementing this were the fruits of what Prof. John Bourne described as "the war of the longest purse": the superabundance of material stocked by BEF quartermasters. Although the profligacy of the BEF from 1916 onwards has often been criticised by regular soldiers schooled in Britain's pre-war obsession with parsimony, under the circumstances it proved vital. Almost all the innumerable supply dumps and canteens contained 21-30 days of supplies over and above normal daily requirements, so that troops falling back found fully-stocked dumps to be 'drawn down'. The BEF also had another major



shelling, the overriding priority was to deny the Germans the use of forward supply dumps and railway assets.

While pre-existing plans to move reinforcements from across the front by rail were put into action, hospitals, locomotives, rolling

using bicycles, horses and staff cars co-ordinated the maintenance of supplies. Divisions, which under normal circumstances would jealously protect their own supplies, engaged in 'area supply': the dumping of supplies for the use of any troops or units moving

**● Mechanical transport was the key to moving troops and supplies quickly in a time of mobile war, as seen in the image on the facing page. However, that did not make horse, or mule, power redundant – as the picture above highlights only too clearly!**

advantage when it came to maintaining supply during such a fast-paced, unpredictable battle - mechanical transport (MT). As described in preceding articles, during the 1917 German Withdrawal the BEF had gained its first experience of full mobile war as it pursued the enemy to the Hindenburg Line. Maintaining supply and mobility in the absence of railways had been a particular challenge for a logistical system built around static warfare and many of the lessons learned were quietly acted upon throughout 1917, chief amongst which was the importance of MT, to which Haig was fully committed - a stance that paid dividends throughout 1918 and arguably provided the single biggest contribution to the maintenance of BEF supply during both the defensive and offensive mobile battles of 1918.

By 23-24 March it was becoming clear to BEF's logisticians that the German menace now extended beyond that of the battle area. There was the threat to the key rail hub of Amiens; the potential loss of Abancourt to the south-west of Amiens severing north-south rail communication; and the very real danger of Third and Fifth armies being split by the advancing Germans, of which the latter was the most pressing problem. The Quartermaster-General (QMG), Travers Clarke, held a conference on 24 March where the decision was made to prepare for the abandonment of Fifth Army. The following day the QMG began preparing to pull back towards the north. As the situation became more critical, on 26 March he made the decision to effectively abandon the southern line of

Communication (LoC). These decisions, if put into practice, would critically disable the BEF's fighting ability and very likely achieve Ludendorff's aims.

The crucial date was 26 March, when the QMG's plans were put on hold in the nick of time. The French and British agreed to appoint Foch as 'Generalissimo', unifying both forces under a single commander. Increasing French intervention prevented Third and Fifth armies splitting, and the German offensive subsequently stalled due to heavy casualties and logistical failures. Further fighting saw Amiens brought under German

**'At the Lys the losses of Michael and the German ignorance of logistics translated into far fewer stormtroopers and an ongoing chronic shortage of ammunition severe enough to blunt their attack and truncate their depth of penetration.'**

artillery fire, but by then it was clear the worst was over.

From 9-29 April Ludendorff launched a second offensive against British forces in the north between Bethune and Ypres. The initial assault drove hard towards the vital Hazebrouck rail centre, advancing to within five miles by 12 April. During the course of these battles of Messines, the Ypres Salient, Bethune, Armentieres, Bailleul and Kemmel were all lost; Second Army nearly outflanked and the vital Poperinghe-Ypres road, Second Army's main supply artery, nearly severed. Once again, the QMG prepared to take the momentous decisions that would most likely see the BEF lose the Channel ports and be driven into the sea, but by late-April the offensive had petered

out due to heavy casualties and logistical failure - and this time with far less territory captured.

At the heart of Germany's offensives were two fatal flaws: the reliance on tactical victories somehow translating into strategic gains, and the almost entire absence of operational logistical planning, provision or indeed any understanding of its critical role in modern warfare.

During Operation Michael the BEF convinced itself that Ludendorff planned to take the strategic prize of Amiens, but this was not the case. The initial assault was launched towards

Amiens but the premature withdrawal of General Maxse's XVIII Corps at the southern end of Fifth Army's front presented a tactical opportunity the Germans could not resist, thereby changing their axis

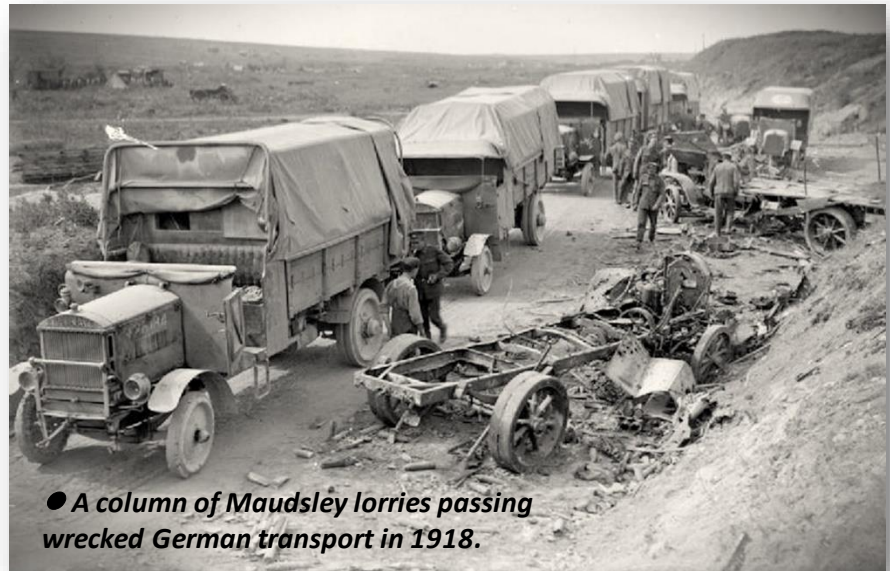
of advance. The result was a dispersion of German effort and a gift of time to the BEF. When the attack resumed towards Amiens the Germans still did not recognise its critical nature, stuck on its fringes after being halted by a combination of dogged defence, fearful losses and crucial supply shortages. They had failed to make Amiens a clear operational objective.

The German stormtrooper divisional first-line transport was reasonably good, but their operational logistic capability was not so strong. German second line operational transport often consisted of a jumble of wagons drawn by whatever draught animals they could lay their hands on and lorries running on wheel rims. Time after time opportunities were

denied because of lack of food, ammunition and supplies of all classes. The abandoned BEF supply dumps were, of course, a wondrous cornucopia - a point not lost on the hungry follow-up troops fed on a propaganda diet of British shortages. The whole was made worse by Ludendorff's choice to attack across a shattered landscape bereft of road and rail that made supply a nightmare and which would be their undoing when the British resumed the attack in August.

At the Lys the losses of Michael and their ignorance of logistics translated into far fewer stormtroopers and an ongoing chronic shortage of ammunition severe enough to blunt their attack and truncate their depth of penetration. The menace posed by Germany was a function of the compressed nature of British territory; the absence of a viable defensive line behind Ypres; the exhaustion and paucity of BEF troops; and the vulnerability of key BEF logistical centres and arteries. The Germans had again been driven by tactical concerns that saw them switch their attack axis and disperse their force. Ludendorff recognised that Hazebrouck was important, but not as a critical transport junction that could cripple the BEF but as a means of bringing British reserves to battle. Consequently, he did not make Hazebrouck his main objective and squandered dwindling resources while the Second Army withdrawal from the Ypres salient left the Germans with a devastated wasteland they could not hope to maintain supply across.

What of the British? The 'long purse' of British productive capacity, combined with its developing understanding of the central operational role played by logistics, was such that the



● *A column of Maudsley lorries passing wrecked German transport in 1918.*

losses of material were of little concern. The BEF moved 350,000 tons of ammunition and fired fifteen million shells during March and April but far more shells poured into the ports than were expended. During the first week of battle the BEF lost over 850 artillery pieces, but stocks maintained on the LoC more than made up for the losses and by the end of April the BEF was back in 'credit'.

After April the Germans switched their attention southwards, expending more irreplaceable stormtroopers and failing to learn the logistical lessons that had doomed their initial attacks. In the interim the BEF had replaced its losses and increased its material might: focusing on supply and building a completely new north-south railway system behind the original that would later become the logistical launch pad for the 100 Days Offensives.

After nearly four years of war the BEF had transformed its inadequate and inefficient logistical and administrative system into a weapon that lay at the heart of its operational method and paved the way for victory. Conversely the Germans failed to understand the primacy

of operational logistics and pursued a tactical fallacy they would repeat in the next war.

Perhaps the most succinct summary of German logistical failure belongs to a humble Tommy, Private William Burns McCreath of the 3<sup>rd</sup> Scottish Rifles, who was captured in March 1918 and made this observation: *"German regiments were being rushed to the front and we looked very sorry sights to them. I'm sure they jeered at us plenty as they went past. But we were taking stock of their transport and horses and motors, and if their army was expecting success with yon conglomeration, they expected what was not."*

#### Notes

- (1) Initially Ludendorff wanted to attack first on the Lys sector. Although an eminently sensible idea the concept was still driven by the same thinking. It was switched to 'second place' due to the fact that the Lys Valley was thought too marshy until April, an unacceptable delay as far as the Germans were concerned.
- (2) These consisted of an 'Outpost Zone', a 'Battle Zone', where the main battle was to take place and a 'Rear Zone'.
- (3) Ludendorff was particularly unhappy with the results of 21 March expecting his forces to penetrate much further.
- (4) The communications time 'lag' involved also meant that although 'aware' of battle they were unaware of how it was developing.

# 1918

The initial request from brigade would have gone through the division to IX Corps while the relevant Fourth Army and GHQ staffs were kept 'in the loop'. That request would then move through the Quartermaster-General's (QMG) office at GHQ and thence to the Commandant of Boulogne Base. Although cork lifejackets are relatively light they are bulky so the QMG would need to provide rail transport from port to railhead while IX

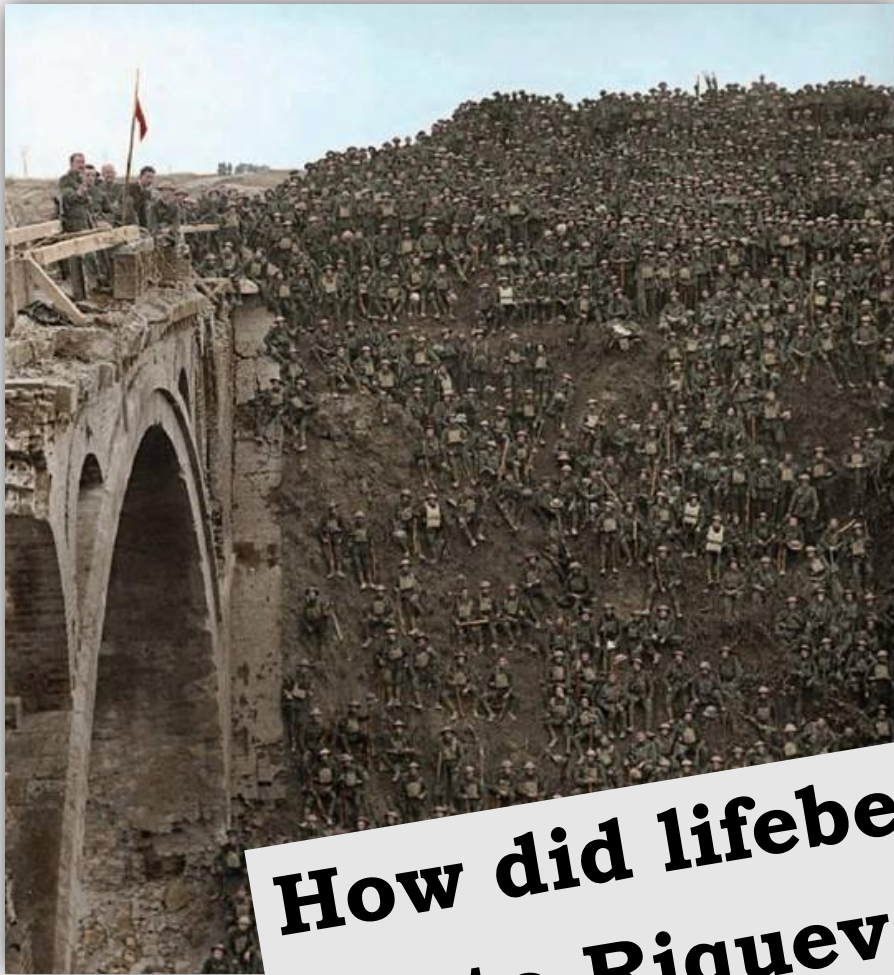
Corps Senior Mechanical Transport Officer allocated lorries from his pool - possibly in conjunction with Fourth Army's Supplies and Transport and even GHQ Motor Transport Reserve. From the railhead three-ton lorries would be used to transfer the lifejackets to the Divisional Refilling

Point whereupon they would be transferred to Horse Transport and distribution through brigade down to battalion level.

What is most remarkable is the speed at which this must have been done as the first divisional order for the attack was issued on 25 September and the lifejackets delivered, tested and ready by the evening of 28 September!

An incredible achievement that would have taken at least ten days or more in 1917 and a testament to the professionalism, flexibility, organisation and responsiveness of both the BEF's supply system and the much-maligned 'Bloody Red Tabs' that made it happen.

**by Rob**



## How did lifebelts get to Riqueval?

One of the most remarkable 'tactical incidents' of the Battle of the St Quentin Canal was the 'Passage at Bellenglise', and in particular the capture of the vital Riqueval Bridge by 137th Brigade (46th North Midland Division) on the morning of 29 September 1918. This action gave rise to one of the most iconic images (above) of the war: the sight of 137th Brigade troops posing victoriously on the steep bank of the canal after a successful crossing wearing an unusual addition to their battle dress - lifejackets.

In the event the lifejackets (and rafts, floating bridges, 'mud mats', collapsible boats, ropes and sundry other means of crossing) were not really needed thanks to the heroic actions of Sapper Fred Openshaw of 466th Field Company (Royal Engineers)

who, with 'A' Company, 1/6th North Staffs Battalion, captured the bridge before it could be demolished by its German defenders.

Lifejackets are not 'standard stores' so how did 137th Brigade acquire 3,000 lifejackets at short notice? RE Priestley's story of the 46th Division, *'Breaking the Hindenburg Line'*, attributes this to 'some genius' who simply telegraphed the authorities at Boulogne who gathered 3,000 lifejackets from leave boats and sent them up the line.

The question of how they were 'sent up' is ignored but by 1918 the BEF logistical 'system' was extraordinarily well organised and using what we would today call 'SOP's' (Standard Operating Procedures) it is possible to reconstruct the journey...



# Western Front Association 2015 Spring Conference

(For tea/coffee/lunch please notify at least 2 weeks in advance)

Saturday 18th April 2015  
at Peel Hall, University of Salford  
M5 4WT

[www.salford.ac.uk/about-us/travel](http://www.salford.ac.uk/about-us/travel)  
(see map on carrier sheet)

9.30am tea/coffee

10.15am Welcome from Chairman

10.20am Territorials in 1915 by Bill Mitchinson

11.10am The Salford Pals by Mike Stedman

12.00 noon lunch next door in the Salford Museum Gallery  
(Must be paid by 2nd April)

1.15pm Railways in the Great War by Rob Thompson

2.15pm tea/coffee

2.45pm President's remarks & AGM

4.30pm finish and departure

August 2018

**ROB'S presence will be missed at so many WFA events at which he was always a valued presence....**

19th September



The Scottish branches of the Western Front Association present

## Scotland in the Great War

A WFA Day Conference looking at Scotland's contribution to the Great War, and the impact at home.

This comprehensive conference features a number of influential speakers who will present a variety of papers covering subjects particularly of Scottish interest.

**"Scotland in Britain's New Armies in the Great War"**  
Peter Simkins, Hon. Professor in Western Front Studies, University of Wolverhampton; Hon. President of the WFA

**"Scotland's War 1914-1919"**  
Yvonne McIwen, Edinburgh University, Project Director, Scotland's War 1914-1919

**"Scotland in British Propaganda 1914-1918"**  
Stephen Badsey, Professor of Conflict Studies, University of Wolverhampton

**"Douglas Haig: Hero of Scotland, Britain and the Empire"**  
Gary Sheffield, Chair of War Studies, University of Wolverhampton

**"An Ecstasy of Fumbling: BEF Logistics and Engineering at the Battle of Loos"**  
Rob Thompson, Independent Military Historian

Date: 19th September 2015

Time: 10:00 - 16:30 (doors open at 9:00)

Venue: Bonar Hall, University of Dundee, Park Place, Dundee, DD1 4HH

Including refreshments and lunch

[www.westernfrontassociation.com](http://www.westernfrontassociation.com)



The Western Front Association Bulletin 111

This is a two-day not-for-profit Central London conference on the final campaigns of the First World War. It is organised by the British Commission for Military History (BCMh) and the Western Front Association (WFA). It takes place on 27-28 Oct 2018 at the prestigious Army & Navy Club (The Rag) on Pall Mall. The social and residential venue is the popular Union Jack Club, by Waterloo Station.

Conference: Sat 27 Oct  
08:45 Doors open for registration. Tea and coffee available.  
09:30 Intro and Welcome

- **Keynote**
- GARY SHEFFIELD *British and Dominion Conscripts - Forgotten Soldiers in a Forgotten Victory*
- **Panel 1: "At The Sharp End"**
- PETER HODGKINSON *Deconstructing the 'Weapons System' - Fourth Army at the Selle*
- DEREK CLAYTON *Decisive Victory: The Battle of the Sambre*
- TOM THORPE *Military group cohesion in the BEF during 1918: a forgotten key to victory?*

- JACK SHELDON *Im Felde unbesiegt? German Morale and Combat Effectiveness in Autumn 1918*
- Sandwich lunch (included)
- **Panel 2: "Forgotten Allies?"**
- SEBASTIAN LUKASIK *Perfecting Attrition: The U.S. 2nd Division in the Champagne Offensive, Sep-Oct 1918*
- WILLIAM PHILPOTT *Forgotten Victors: General Marie-Eugene Debeney and the French First Army in the Hundred Days' Campaign*
- DAVID ZABECKI *The Race to Sedan, 6-7 Nov 1918*

# "Forgotten"



Mark V tank goes into battle. Courtesy: Imperial War Museum

- **Keynote**
- JONATHAN BOFF *Why did Germany Lose?*

Day ends: 16:40  
Paying Bar open in the Club's drawing room

Conference: Sun 28 Oct  
08:45 Doors open for 09:30 start. Tea and coffee available.

- **Keynote**
- CHRIS PUGSLEY *The New Zealand Division in 1918*
- **Panel 3: "Building Blocks"**
- LINDA PARKER *The Role of the Royal Army Chaplains Department in the last campaigns of the First World War*
- GEDFREY VESEY HOLT *The Tank Corps: a Useful but not Essential Arm or Service in 1918*
- ROB THOMPSON *The Empire Strikes Back: BEF Logistics during the Advance to Victory, 1918*
- JANE ORR *Spanish Flu: the Real Killer of 1918*
- Sandwich lunch (included)
- **Panel 4: "Forgotten Fronts"**
- JOHN PEATY *Allenby's Victory at Megiddo, September 1918*
- JOHN ALEXANDER *A New type of warfare: Air Land Integration at Megiddo*



Army & Navy Club Entrance

- WILLIAM FRANK *1917-1918 - Greatness*
- **Keynote**
- JESSICA ME *Limping Home: War Disal*
- 16:00 Vote & Day ends!

- Sandwich Served or
- Egg, C
- Tuna
- Salm
- Corc
- Mal
- Rol
- Plus crisps, soups
- freshly brewed tea and coffee



Army & Navy Club Conference Room

## A World at War 1914-18 Two new WFA anniversary conferences

# JUNE 4

### The Somme and Beyond (Fifth President's Conference)

Saturday 4th June 2016 10:00 - 17:00 Doors 09:15  
Optional dinner: 18:15 - 20:00 (£19.50 per head)  
Tolly Ho Conference Centre, Birmingham B5 7RN

- The Brusilov Offensive - Nik Cornish
- The Most Brutal of Days: The Assault of Thiepval, 1st July 1916 - Michael Stedman
- A Hard-won Success: The 18th (Eastern) Division at Thiepval, September 1916 - Prof Peter Simkins
- The Irish Soldier in 1916 - Lar Joyce
- Beyond the Verdun Ossuary: French Army command and combat perspectives in 1916 - Prof. Martin Alexander

Birmingham

### Perspectives on the Somme

Saturday 9th July 2016, 10:00 - 17:00, Doors 09:15  
Manor Academy, Millfield Lane, Nether Poppleton, York YO26 6AP

- Reflections on 1st July, 1916 - Prof John Bourne
- BEF Artillery on the Somme and the lessons learned - Geoff Spring
- British Intelligence on the Western Front in 1916 - Dr Jim Beach
- Rawlinson on the Somme - Prof Gary Sheffield
- "The Somme of the parts": The BEF experience on the Somme, 1916-1918 - Rob Thompson

**HOW TO BOOK:** £30 per conference or £50 for both. Price includes: buffet lunch and tea/coffee on arrival, plus during morning/afternoon breaks. Free parking at both venues. To book, please call the WFA Office on: 020 7118 1914 - BM Box 1914, London, WC1N 3XX

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# JULY 9

York



*Beginning at Amiens on 8 August 1918 the Allies, spearheaded by the British Expeditionary Force (BEF), inflicted an unbroken series of defeats on the German Army, now commonly referred to as the 'Hundred Days Offensives' ending on 11 November 1918 with the signing of the Armistice. Why did the allies not continue the pursuit and deliver a final and unambiguous blow? This question is especially important given the currency of Hitler's 'stab in the back' thesis, so popular in 1930s Germany. There has been an assumption that by November 1918 German and allied statesmen saw no political advantage (and much disadvantage) in fighting on, but there is an assumption here that the BEF were operationally capable of maintaining their advance. This was not the case: the BEF was perilously overstretched, suffering serious equipment shortages and vulnerable to counterattack...*

### **System degradation:**

The logistic and engineering events so vital to the Advance to Victory in 1918 were an anti-climax - the essential groundwork had been developed throughout the course of 1916 and 1917 and given greater impetus by the 1917 German withdrawal. Although far from perfect, the BEF began the Advance to Victory with an intelligent, balanced, flexible and extremely effective logistic and engineering system specifically designed for mass mobile warfare. When tested in the crucible of the advance it did

# The Empire strikes back!

## 1918

not fail. It carried the BEF over the 'devastated zone' of the Somme, through the formidable Hindenburg Line and on to the relatively undamaged 'green fields' beyond, reaching as far as Valenciennes and Mons, the latter the site of the start of the BEF's original retreat in 1914. The combination of improved and rationalised Mechanical Transport (MT), a greater (if inadequate) focus on roads and bridging, all centralised or decentralised at the most effective level, carried the BEF well beyond the original limit of 30 miles from railhead. Troops entering Mons and Valenciennes as the Armistice took force were an astonishing 50–60 miles in advance of the Hindenburg Line.<sup>(1)</sup>

No matter how flexible the system was though, it could not carry on indefinitely. After the breaching of the Hindenburg Line at the end of September the BEF supply system began to degrade as the gap between the advancing front and the nearest usable railhead widened.<sup>(2)</sup> Although reliant on MT the BEF was not a motorised army and was dependent upon rail supply from which the MT could draw.

As October wore on the system began to break down. Bridging began to fall further behind. On 19 October 1/ Battalion, Canadian Railway Troops noted that the roads and rail were horribly congested and that '... nine trains were standing between GOUZEAUCOURT and MARCOING at 16:30 hours owing to congestion in MARCOING YARD'.<sup>(3)</sup> On 26 October work was being seriously impaired by German delay-action mines and despite the use of specifically-trained 'IED' bomb-disposal engineers drawn from Tunnelling Companies it was '... feared that much trouble and delay will be experienced from this source, as it is most difficult to locate where these have been planted'.<sup>(4)</sup> One was even disguised as the grave of an unknown German soldier.<sup>(5)</sup> As the month wore on the diary describes problems with increasing congestion, lack of water for locomotives, more mines, wet weather and the exhaustion of the men.<sup>(6)</sup> During early November the mines and shortages continued to take an increasing toll.<sup>(7)</sup>

Shortages were occurring elsewhere. The 2nd Australian Divisional Artillery finally received underclothing 'after some weeks owing to transport difficulties, which were accentuated by the rapidity of the advance'.<sup>(8)</sup> The 4th Australian Divisional Ammunition



● *Royal Engineers bridging the Canal du Nord near Moeuvres on 28 September 1918.*



Column noted shortages in its end of month report of gun parts, tunics, breeches, mule shoes and the fact that many of its SAA wagons were worn out and useless.<sup>(9)</sup> Similar shortages bedeviled the 1st Australian Divisional Train, Number 3 Company, noting the increasing distance from railhead as a specific problem.<sup>(10)</sup> More seriously in early October the advanced troops of the 2nd Australian Division ‘... repeatedly ran out of SAA. for machine guns, rifles and revolvers’.<sup>(11)</sup> The Australian Corps SMTO diary notes other problems.

On 18 October the corps was forced to withdraw a number of

sorely-needed lorries in order to effect essential repairs and allow the mobile workshop lorries to ‘... catch up with overhauls’.<sup>(12)</sup> A shortage of lorry springs was also developing. Its seriousness can be gauged by the fact that the Deputy Director, Supplies and Transport (DDS&T) Fourth Army sent out an army-wide circular stating that the advance was entirely dependent upon MT and that ‘... unless something is done to keep more lorries on the road than at present, a serious check to our progress may be anticipated’.<sup>(13)</sup> Not even General Monash, Commanding Officer of the Australian Corps, had enough influence to acquire springs for his own car.<sup>(14)</sup>

MT mileage and breakdown rates were also increasing dramatically as a statistical analysis of the Canadian Corps Mechanical Transport Column between August and October demonstrates. In September 1918 the minimum number of lorries under repair was 82, the maximum 154. In October those rates increased to 114 and 199 respectively, an average increase of 38 per cent. In August the total lorry mileage was 794,795 miles. By September that had increased by 40 per cent to 995,555.<sup>(15)</sup>

#### **Overextended:**

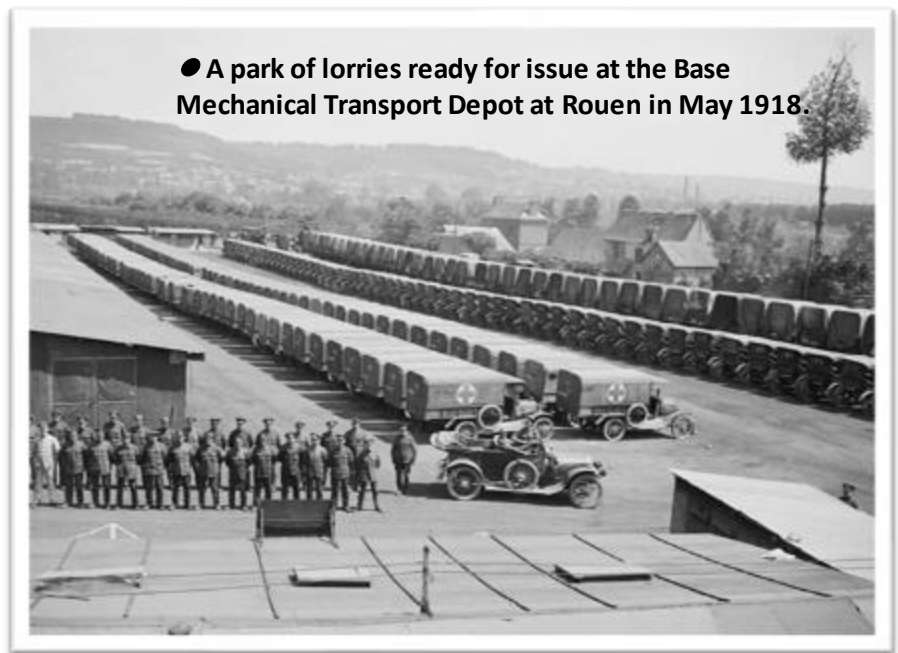
With winter closing in – and given the commensurate need for winter accommodation for the exposed troops (itself requiring a major and fundamental reorientation of supply), increasing supply problems and a combination of heavy rain and heavy traffic rapidly destroying the brittle French roads – it was

**‘It is possible that the German Army could have withdrawn to a winter line and at least partially reconstituted itself, dragging the war on into 1919.’**

clear that the BEF could not continue for much longer. In October planning began to abandon the advance until it could be resumed in 1919.<sup>(16)</sup>

By November Germany was unravelling at the seams, the consequence of four years of attritional warfare and the iron grip of the Royal Navy blockade. The German Army was still a dangerous adversary falling back on its lines of supply but as a coherent military force it was close to disintegration. Conversely the BEF was dangerously overextended and unable to advance any further. The French and American armies were in a similar position. For all sides the Armistice was not a question of political or military choice *per se* but one of necessity. If the Allies had refused the Armistice their inability to advance would have been quickly exposed. Although unlikely, it is possible the German Army could have withdrawn to a winter line and at least partially reconstituted itself while putting its national 'house' into some kind of order with the war dragging on into 1919. Although the Allies had the material and manpower to make German defeat almost certain, the nature, cost and political consequences of a 1919 victory were unknown quantities as was the political and social will to carry on the war for another year.

The BEF logistical and engineering 'learning curve' generally reflects that of the BEF as a whole but its specific timing, tempo and rhythm was different. In common with the rest of the BEF the logistical and engineering service was a learning organisation that assimilated, studied lessons and altered itself accordingly. It attempted to integrate various



operational elements into a whole that was more than the sum of its parts. It changed its organisational and administrative C2 in response to experience, centralising or decentralising as necessary. Like the rest of the BEF the locus of C2 moved both upwards and downwards to corps, corps level being the most operationally apposite level.<sup>(17)</sup> Throughout 1917 it found itself slowly returning to the pre-war principles enshrined in FSR (1912) in order to provide unparalleled mobility in 1918. Although it took time and was only ever partially understood, the BEF also began to recognise the centrality of logistics and engineering in its 1918 operations, which was a very different situation from that of 1917.<sup>(18)</sup> It is upon the shoulders of the logistical 'all-arms battle' that victory in 1918 rests, but that victory was still a very close run thing.

## Notes

- (1) Beadon, RH, *The Royal Army Service Corps: A History of Transport and Supply in the British Army* (Vol. II), (Cambridge: Cambridge University Press, 1932), p.146.
- (2) Henniker, AM, *Official History of the Great War: Transportation on the Western Front 1914–1918*, (London: HMSO, 1937), p.XIX.
- (3) LAC, RG9, Militia and Defence, Series III–D–3, Volume 5011, File: 730 – 1st Battalion, Canadian Railway

Troops – War Diary, October 1918. Entry for 19/10/18.

- (4) LAC, RG9, Militia and Defence, Series III–D–3, Volume 5011, File: 730 – 1st Battalion, Canadian Railway Troops – War Diary, October 1918. Entry for 26/10/18.
- (5) LAC, RG9, Militia and Defence, Series III–D–3, Volume 5011, File: 730 – 1st Battalion, Canadian Railway Troops – War Diary, October 1918. Entry for 26/10/18.
- (6) LAC, RG9, Militia and Defence, Series III–D–3, Volume 5011, File: 730 – 1st Battalion, Canadian Railway Troops – War Diary, October 1918. Entries for 30–31/10/18.
- (7) LAC, RG9, Militia and Defence, Series III–D–3, Volume 5011, File: 730 – 1st Battalion, Canadian Railway Troops – War Diary, October 1918. Entries for 01–10/11/18.
- (8) Australian War Memorial (AWM), AWM4, 13/11/32 Part 2 – Headquarters 2nd Australian Divisional Artillery – War Diary, October 1918, *Administrative Report*, Appendix 'G', p.101.
- (9) AWM, AWM4, 13/77/29 – 4th Australian Divisional Ammunition Column – War Diary, October 1918, Appendix 11, *Monthly Review of General Condition of 4th Australian Ammunition Column*, p.1.
- (10) AWM, AWM4, 25/14/48 – 1st Australian Divisional Train – War Diary, October 1918, Appendix 'J', *Report on supply services for the Month of October, 1918* and Appendix 6, War Diary of No. 3 Company, October 1918, p.1.
- (11) AWM, AWM4, 1/44/39 Part 2 – General Staff, Headquarters 2nd Australian Division – War Diary, October 1918, *Report on Operations – October 3rd to 5th, 1918*, p.10.
- (12) AWM, AWM4, 25/4/22 – Senior Mechanical Transport Officer, Australian Corps – War Diary, October 1918. Entry for 18/10/18.
- (13) AWM, AWM4, 25/4/22 – Senior Mechanical Transport Officer, Australian Corps – War Diary, October 1918. Appendix 4, Fourth Army Circular dated 26/09/18.
- (14) AWM, AWM4, 25/4/22 – Senior Mechanical Transport Officer, Australian Corps – War Diary, October 1918. Entry for 19/10/18.
- (15) LAC, RG9, Militia and Defence, Series III–D–3, Volume 5021, File: 788 – Canadian Corps Mechanical Transport Column – War Diary, August–September, 1918.
- (16) Beadon, (1932), pp.146–147.
- (17) See: Simpson, A, *Directing Operations: British Corps Command on the Western Front 1914–18*, (Staplehurst: Spellmount, 2006), *passim*.
- (18) See: Thompson, Rob, 'Mud, Blood and Wood: BEF Operational and Combat Logistics—Engineering during the Battle of Third Ypres, 1917' in Doyle, P and Bennett, M R, (eds.), *Fields of Battle: Terrain in Military History*, (Dordrecht: Kluwer, 2002), *passim* for a critique of BEF logistics and engineering during Third Ypres, 1917.

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In the modern age it is, of course, far easier for legacies to be maintained, and The WFA is delighted to be able to host a full selection of Rob Thompson's talks on its busy YouTube channel at [this link](#). Subscribing is advised to keep up to date with regular posts.

# A LASTING LEGACY...

*"Rob was a striking personality in life and even more so in academic life, but his ability to inspire did not rest on his personality. There was substance beneath the style. He was an original thinker on the British Army in the Great War. He knew things that other people did not know, knew how they fitted together and how they affected the prosecution of the war for good and ill, and he was able to convey these insights in a penetrating and memorable way. That is what made him inspirational." (Professor John Bourne, WFA Vice-President)*

*"Rob first came to my notice at an important First World War conference at Salford in the late 1990s, when he grandly arrived in a vintage American convertible. He stole the show. Over the following decades I became accustomed to seeing Rob in his motorcycle leathers and Motorhead T-shirt. Like everyone else who got to know Rob socially or academically, I came to have the highest regard for his immense knowledge and passion for his chosen subject areas. I shall never forget him." (Professor Peter Simkins, WFA Co-Patron)*



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**Rob  
Thompson**

*1<sup>st</sup> July 1964 – 20<sup>th</sup> March 2023*

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