

Introduction

It's 1630 hrs on 6 June 1944, Captain Foreman just arrived at his company harbour near Colleville. An hour earlier, he and the 11 lorries of C Platoon 90 Company RASC (90 Coy) disembarked the LSTs they had been stuck on for the past six days waiting to cross the English Channel to support Operation Overlord, the Anglo-American invasion of Normandy France. Loaded in these 11 lorries are supplies for 6 Airborne Division currently operating to secure the British left flank over the Orne. These loads consist of 'pet[rol], [ammunition], R[oyal] E[ngineer] stores, and water', stores vital for the paras of 6 Airborne Division to resist a German counter attack.² Alas, despite the urgency of these stores, Major Cuthbertson, 90 Company's Officer Commanding has yet to make contact with 6 Airborne so C Platoon has little to do but wait for contact to be established.³ Thus, doubtless, the men of C Platoon, 90 Coy would have dismounted their lorries and pause. Likely, they would have apprieciated being once more on dry land having spent the last few days being bounced up and down in the English Channel. A few kilometres away, the men of the 6th Airborne Division, the 3rd British Infantry Division, and 90 Cov's home brigade, 27th Armoured Brigade were, in the case of 6th Airborne, guarding the British flank, or in the case of 3 Div and 27 Armoured Bde, pushing inland to try to reach Caen.

Of course, the vital efforts of the 6th Airborne Division and the other fighting troops of the British Army in Normandy have been fairly well studied. Extensive critiques and

 $^{1.\ 90\ \}mathrm{Coy}\ \mathrm{RASC}\ \mathrm{War}\ \mathrm{Diary},\ \mathrm{WO}\ 171/2377,\ \mathrm{The}\ \mathrm{National}\ \mathrm{Archives}\ \mathrm{UK}\ (\mathrm{TNA}),\ \mathrm{Kew},\ 1–6\ \mathrm{June}\ 1944$ (hereafter cited as TNA WO 171/2377).

^{2.} TNA WO 171/2377, S & T Report (June History Report) p 4.

^{3.} TNA WO 171/2377, 6 June 1944.

justifications have been made on British infantry-armour co-operation, the agression — or lack thereof — displayed by British troops, Allied inadequacies in armour, Montgomery's personnality, tactics, vs firepower, etc. In short, we often discuss what went wrong or how we faught; however, what we often ignore is the critical question of what enabled us to fight. The work done by troops a few kilometers behind the front line is generally ignored as a side-show; yet, the work of ensuring the combat arms are well supplied with all the minutiae of war from ammunition, to food, to water, and other general supplies is what will make or break an army. Thus, in light of this gap, I hope to aruge for the centrality of logistics in the British preference to expend firepower rather than lives. The British Army seems quite helpless compaired to the might of the Wehrmacht until one looks at this Army from a systems approach. It is however, this systems approach that reveals the British Army's strengths.

To examine the centrality of logistics in British Army operations, we will follow Major and 90 Company RASC as they work their way across the English channel, landing in Normandy and following them as the units they support attempt to capture the city of Caen, and we will examine their role in the closure of the Falaise Pocket in August. Along the way, we will first examine how the British Army structured logistics administratively, before joining 90 Coy as they support the 27 Armourded Brigade as they partake in the Battle for Caen. After 27 Armoured Brigade is broken up at the end of July, we will see how 90 Coy integrated into a larger and longer supply column as they support infantry units through Normandy. Following this, we will have a breif discussion on historical methods and how they apply to military logistes.

Historiographical Review

The Battle of Normandy is of course, a well studied topic. Much has been written on this battle from books on the Second World War at large to publications that focus squarely on operaitons and tactics in Normandy. Curiosuly, there is also a second historiography which discusses logistics at large; however, the precise area of military logistics in Normandy is less well covered.

On WW2

Britain's Other Army: The Story of the ATS

Why the Allies Won

On Normandy

Clash of Arms

Overlord

Fields of Fire: Canadians in Normandy

Montgomery and 'Colossal Cracks': The 21st Army Group in Northwest

Europe, 1944-45

The Normandy Campaign 1944

Gators of Neptune: Naval Amphibious Planning for the Normandy Invasions

Neptune: the Allied Invasion of Europe and the D-Day Landings

From the Normandy Beaches to the Baltic Sea: The North West Europe

Campaign 1944-1945

Feeding Mars: The Role of Logistics in the German Defeat in Normandy,

1944

On Logistics

Supplying War: Logistics from Wallenstein to Patton The Lifeblood of War: Logistics in Armed Conflict

A Great Feat of Improvisation

War of Supply: World War II Allied Logistics in the Mediterranean

Supplying the Troops: General Somervell and American Logistics in WWII

Military Logistics and Strategic Performance

The Story of the Royal Army Service Corps

Logistics and Modern War

Logistics Diplomacy at Casablanca: The Anglo-American Failure to Integrate

Shipping and Military Strategy

Strategy and Logistics: Allied Allocation of Assault Shipping in the Second

World War

The Science of the Soldier's Food

D Day to VE Day with the RASC

Tools of the Trade A Note on My Sources

Overlord as Planned

Op Overlord was made up of a number of smaller operations. The seaborne landings were part of Op Neptune. This was the operation that established a 50 km wide logistical beachhead in Normandy. Neptune divided this section of Normandy coastline into five discontinuous beaches. The Allied right was achored by Utah beach on the Cointine peninsula and the Allied left was anchored by the River Orne and the Caen Canal at Sword beach.

Between these flank beaches was Omaha, Gold, and Juno beach. The Americans were responsible for Utah and Omaha, whilst Anglo-Canadian forces were responsible for Gold, Juno, and Sword beaches. Each beach was subdivided into a 2 – 4 sub-beaches and assigned a letter from A to R. This study will primarily concern itself with the affairs of the troops of the 3rd British Infantry Division and 27 Armoured Bde that landed at Sword beach, specifically, Queen beach.

This study will also concern itself with the work done by 6th Airborne Division as part of Op Tonga. Their objective was to execute a series of airborne landings East of the River Orne, Caen Cannal, and Sword Beach to secure the British left flank. They were also to capture the only bridge crossing these water features North of Caen along a road running between Benouvelle and Ranville. All this was to be done during the night before the forces of Op Neptune landed. For approximately six hours, the paras of 6th Airborne would be cut off. Once the British landed at Sword beach, they would push inland, to Benouville, cross the bridges if they were still intact, and reinforce and resupply 6th Airborne. That is how the 11 lorries of C Platoon 90 Coy finds itself waiting in Colleville, around 4km away from Benouville waiting for their CO to link up with the Paras so that C Platoon could resupply 6th Airborne who would likely be running low on stores by this point. C Pl would then keep the paras supplied via Queen Beach until 6th Airborne's RASC unit could take over on D + 1 after landing at Juno.⁴

^{4.} S & T History 90 Coy RASC Armd Bde-Assault an account of the work carried out during the first four days of the Invasion, June 1944, WO 171/2377, The National Archives UK (TNA), Kew, 1 (hereafter cited as TNA WO 171/2377 June History Report).

By 1800, C pl made contact with the Paras and, as the Paras had successfully captured the Orne and Caen Canal bridges, C pl was able to replenish the depleating ammunition of 6th Airborne by 2300 hrs on D - Day — a five hour job. As 6th Airborne's area of oeprations had yet to be fully secured, the drivers of C pl faced sniper fire throughout the day.⁵

Not all of 90 Coy landed on D - Day however, whilst A and D Pls stayed in the UK to be brought across the channel on B Pl landed on D - Day. Their tasking to simply support 27 Armd Bde primarily in terms of their fuel requirements and to otherwise keep the Bde supplied. Their 13 lorries were mainly loaded with fuel for the Bde's Sherman tanks. Alas, Due to the heavy shelling of Queen Beach however, only 9 lorries actually landed by 1200 hrs. The lorries that landed proceeded to the 27 Armd Bde's A Echlon Area in Hermanville-Sur-Mer and would quickly be put to work keeping the Bde supplied with fuel and ammunition. Hermanville, situated along the main road departing Queen Beach — location of the Beach Sector Stores — rapidly became 90 Coy's control point where viehicles would check in before proceeding to the beaches or to the units.

As a point of curiosity, you may have noticed how B Pl was not preloaded with amunition. This was because the Bde brought their own ammunition ashore firstly with the ammunition they carried in their tanks, but also with the ammunition they towed behind their tanks in *Porpoise* sledges.⁷ These sledges would be released shortly after the tanks

^{5.} TNA WO 171/2377, 6 June 1944.

^{6.} TNA WO 171/2377, 6 June 1944.

^{7.} TNA WO 171/2377 June History Report, 2-3.

made it ashore. Collecting the ammunition in these sledges also became one of B Pl's tasks in the first hours of the invasion.

Perahps as a happy co-incidence, Neptune had failed to meet it's D Day objective of pushing all the way to Caen — an optimistic goal anyway. This meant that supply lines were shorter than planned which doubtless decreased the stress on the 9 lorries of B Pl. It is difficult to understate how heavy the fighting was. Indeed, there were many instances where tanks were replenished with tanks still 'in their forward positions'. This single understrength platoon was trying to keep a whole brigade supplied. Tasks which would ordinarily been reasonably simple tasks were now increadably onerous. Take for example the task of refueling and reammunitioning the tanks. What should have been a simple task done at the end of each day to ensure the Brigade was ready for the next day's operations became a night long ordeal requiring the initiative of the 9 lorrie drivers of B Pl who had to understand the requirements of their client unit before returning to the beaches to try to obtain the critical stores required by their units. It was paramount that these drivers not only knew what was needed, but the priority of what was needed in the event that there were insufficient stores available to meet an urgent order. This way, lorries were always moving and stores were always flowing. Fortunately, by nightfall on D - Day, a small Brigade supply dump was beginning to form in Hermanville — an act taht would logistic chains. Even still, this put a great strain on the men who were worked day and night until D + 4.9

^{8.} TNA WO 171/2377 June History Report, 2.

^{9.} TNA WO 171/2377 June History Report, 2.

Thus was the dispositions 90 Coy on D-Day, two Pls would make their way ashore: one to support their parent unit, 27th Armd Bde and one help the Division to their left — 6th Airborne — until their own RASC unit could make it. Here, one can begin to see the role of 2nd line transport companies such as 90 Coy. They form the final interface between the wider supply system and the fighting units — it is these until that deliver the goods — however, how did these 90 Coy interface with the rest of Army?

The Supply Chain in the Field

Whilst admittedly, the supply system on D - Day did appear somewhat improvised and ramshackle, there was good reason for this. Because the British failed to advance as far forward as planned, the supply dumps that were to be set up all along Sword Beach failed to materialize in the same way as planned. Still, the logisticians of the British Army tried to beat a formal planned system into an effective supply chain however much improvised. It is worth recalling that, even without additional planning, the British Army's baseline doctrine included a supply chain. This was after all, an army that could expect to be deployed to not just fight a large, European Army, but also fight small wars across vast streches of the British Empire. To do so, the British Army already had an organic logistical capacity that Overlord adapted to its use. At it's core

The principle of supply [in the British Army was] that field units should always have with them, or within reach, two days' rations and forage, and one iron ration, and that these stocks should be replenished by delivery, at a point within reach of the troops, of one day's ration and forage each day.

Moreover, as the British Army was fully mechanized by the Second World War, it was the aim that all viehicles would have full petrol tanks at the end of each day. To enable

operational mobility, 2nd line transport was also to have immediately available, an additional 50 miles of fuel; and 3rd line transport, a further 25 miles instantly available for use. Of course, it is unlikely that this exact fuel holding was available on D - Day; however, this was the standard the British Army would have expected. These principles meant that, at any one point, the British Army was expected to be able to advance independent of it's bases for slightly over 75 mi over the course of three days. Thus, this formed it's maximum operating range.

Of course, it is suboptimal for an Army to operate for long without access to its supply chain so, to support the Army, the supply chain was broken up into four main areas, ordered from furthest to nearest the front line, the Base Sub-Area(BSA), the Line of Communication Area (LoC), the Corps or GHQ Area, and finally, the Divisional Area. Those depots that 90 Coy went to along the beach? Those were Beach Sub-Areas (BSA). In the first days at Normandy, it appears that Beach and Base Sub-Areas were treated as one and the same. Whatever the 'B' stands for, BSAs functioned as the British Army's initial interface between sea and land. The BSA had the docks, the base railway marshalling yard, a main supply depot, a petrol sub-depot, field bakery, and detailed issue depot. Cold storage was also available for rations such as sides of meat, etc — of course, it is unlikely that such nicities were available in the first days of the invasion, fresh raitons weren't even available for quite some time.

The BSA would then theoretically interface with the Line of Communication Area (LofC). These were railway networks or truck convoys that transported stores from the BSA

^{10.} Precis of Lecture No. 12: Petrol No. 27 (Winter) War Course, 2017/7 Box 3 File 7, Directorate of History and Heritage Archives (DHH), Ottawa, s 3.

to the field army. Now, the supply lines in Normandy were quite short, measuring in the ones or tens of kilometers. It was simply unnessessary to have a strict LofC area per se. The field army could simply draw stores directly from the BSA — the LofC area really is not nessessary until the field army is some distance away from the BSA. The LofC would become nessessary as the British Army advanced through France and into Germany. As they went deeper, scheduled and intensional convoys to convey the stores would become more useful in relieving the field army of such transport network.

In any case, regardless of whether the Army was drawing stores directly from the BSAs or from the LofC, eventually, Army would have to start drawing stores. To such ends, the Army was divided into two sections the Corps / GHQ Area and the Divisional Area. At the GHQ level, one begins to see how the British Army sorted supplies. POL and other stores were handled in two theoretically seperate systems. In either case, it is at the GHQ level that stores were bulk broken.

Let's handle the general stores first. Stores are delivered to the Supply Column (Sup Coln) where stores are bulk broken. Think of this bulk breaking with the analogy of a grocery store. A grocery store may recieve it's goods in wholesale, bulk form, but then repackage it into smaller, more usable units to be easier to sell — a retail customer may want 1 lb of almonds, not 1 ton for example. In the case of prepackaged stores, bulk breaking is more similar to the procedure that occurs when a grocery store recieves a palette of cereal which is subsequently unpacked and loaded as single units on a shelf. Thus, the Sup Coln HQ can function as an interface where the Army's bulk handling meets it's piece handing functions.

Likewise, fuel could, at times be shipped in bulk initially however fuel for the British Army was never delievered to field units as such. It was always containerized first into tins. There are fiew modern equivalents to this in our modern world. When we buy fuel at the petrol station, we pump it from a massive underground tank into our cars where it's sold by volume. Rarely do we buy a pre-packed can of fuel. This was however how the British Army prefered to recieve it's fuel — in 4 Gal (18L) of petrol per tin. These tins were nicknamed flimseys, and it was not an ironic term of affection. They were meant to be disposeable so they were built cheap; however, the design teams were perhaps overzelous. The flimseys had an unfortunate habit of breaking or leaking such that it was quite common for them to arrive damaged leading to fairly severe losses in fuel as well as a notable fire risk. Indeed, the flimseys were so bad that the British Army began to simply use captured German (Jerry) petrol cans — hence our modern term jerrycan (a German petrol can).

Nevertheless, despite their questionable durability, the British Army had some sound reasons for using containerized rahter than bulk distribution. Firstly, tanker lorries weren't nearly so common in 1940 as the are today. Secondly, containers are compartmentalized. If a bullet percies a tanker lorry, one may loose thousands of litres of fuel before one notices; hwoever, if a bullet travels through a containerized fuel transport (i.e. lorry full of flimseys), one may loose only a few tins worth of fuel. Moreover, containerized fuel has far fewer mechanical requirements. For bulk fueling to work, one must have a working petrol pump. This could be quite inconvinient. Imagine having a tankerload of fuel but no simple way to get the fuel out of the tanker. Moreover, using this system, you can only fuel a few viehicles at a time. With containerized fuel, one merely pulls up to the viehicles, unload a few tins at each viehicle, and each crew then subsequently fuels their viehicle with a cheap tin funnel.

¹¹. For reference, the 2025 Toyota Corolla sedan has an approximately $50\,\mathrm{l}$ fuel tank whilst the 2025 Ford F150 Raptor pickup truck has a 136l tank.

Of course, this system was quite labourious to use but even so, it was judged by the British Army that the additional labour was worth the cost.

Logistics Working Practices in Theory

The Structure of Supply

The Base Supply-Area (BSA)
L of C Area
Corps or GHQ Area
Div Area

Warehousing

Base Supply Depots

/* Figure out where to incorporate the fact that the British/Canadians focused on firepower over manpower. This means material is critical — A is for ammo, B is for beans, C cold water, D: diesel, E-everything else... */

/* Do I want to expand to include things like traffic control? Traffic jams on Sword Beach may have made the Br fail to capture Caen on D. 10m of dry beach between water and sea wall at high tide. Perhaps an MP or two would have solved the issue. IIRC, RAF beach sqn dealt with it. (See RAF beach sqn/det Was this a critical oversight? Not a lack of tenacity or anything else, but a good, old fashioned traffic jam VI's-a-vis Toronto at rush-hour caused the failure to take Caen? lol — what a way to win a war! */

Return to the moment Operation The Arrivals of A & B Plns Operation Mitten 27–28 June 1944

British Artillery
Support to Operations
Figure out a name
Operation Aberlour

The Lead up to Charnwood Pre Goodwood Goodwood (18-20 Jul 44) Post Goodwood

> Criticality of Supply Conclusion

Bibliography

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