29th July 2025

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.[1] 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 appreciated 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 Coy'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

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1. 90 Coy RASC War Diary, WO 171/2377, The National Archives UK (TNA), Kew, 1–6 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 aggression — or lack thereof — displayed by British troops, Allied inadequacies in armour, Montgomery's personality, tactics, vs firepower, etc. In short, we often discuss what went wrong or how we fought; however, what we often ignore is the critical question of what enabled us to fight. The work done by troops a few kilometres 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 argue for the centrality of logistics in the British preference to expend firepower rather than lives. The British Army seems quite helpless compared 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 Armoured 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 brief discussion on historical methods and how they apply to military logistics.

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 operations and tactics in Normandy. Curiously, 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 anchored by Utah beach on the Cotentin 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 Canal, 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 Benouville 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 depleting ammunition of 6th Airborne by 2300 hrs on D - Day — a five hour job. As 6th Airborne's area of operations 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 Echelon Area in Hermanville-Sur-Mer and would quickly be put to work keeping the Bde supplied with fuel and ammunition.[6] Hermanville, situated along the main road departing Queen Beach — location of the Beach Sector Stores — rapidly became 90 Coy's control point where vehicles 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 ammunition. 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 made

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.

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

Perhaps 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'.[8] This single under strength platoon was trying to keep a whole brigade supplied. Tasks which would ordinarily been reasonably simple tasks were now incredibly onerous. Take for example the task of refuelling 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 lorry 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 that would logistics chains. Even still, this put a great strain on the men who were worked day and night until D + 4.[9]

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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 units 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 stretches 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 vehicles 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.[10] 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 niceties were available in the first days of the invasion, fresh rations 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

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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 kilometres. It was simply unnecessary 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 necessary until the field army is some distance away from the BSA. The LofC would become necessary as the British Army advanced through France and into Germany. As they went deeper, scheduled and intentional 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. Typically, the distance — and thus, also depth of the Army — from the LofC area to the delivery points was 30 – 40 mi (50 – 65 km) At the GHQ level, one begins to see how the British Army sorted supplies. POL and other stores were handled in two theoretically separate 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 receive 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 receives 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.[11]

Likewise, fuel could, at times be shipped in bulk initially however fuel for the British Army was never delivered to field units as such. It was always containerized first into tins. There are few 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 preferred to receive it's fuel — in 4 Gal (18L) of petrol per tin.[12]These tins were nicknamed flimsies, and it was not an ironic term of affection. They were meant to be disposable so they were built cheap; however, the design teams were perhaps overzealous. The flimsies 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 flimsies 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 the questionable durability of flimsies, the British Army had some sound reasons for using containerized, as opposed to than bulk distribution. Firstly, tanker lorries weren't nearly so common in 1940 as the are today. Secondly, containers are compartmentalized. If a bullet pierces a tanker lorry, one may loose thousands of litres of fuel before one notices; however, if a bullet travels through a containerized fuel transport (i.e.

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11. Precis on Lecture "Supplies in War", (Part II) No. 27 (Winter) War Course, 3.

12. Precis of Lecture No. 12: Petrol No. 27 (Winter) War Course, 3. For reference, the 2025 Toyota Corolla sedan has an approximately 50 l fuel tank whilst the 2025 Ford F150 Raptor pickup truck has a 136l tank.

lorry full of flimsies), one may loose only a few tins worth of fuel. Moreover, containerized fuel has far fewer mechanical requirements. For bulk fuelling to work, one must have a working petrol pump. This could be quite inconvenient. Imagine having a tanker load of fuel but no simple way to get the fuel out of the tanker. Moreover, using this system, you can only fuel a few vehicles at a time. With containerized fuel, one merely pulls up to the vehicles, unload a few tins at each vehicle, and each crew then subsequently fuels their vehicle with a cheap tin funnel. Of course, this system was quite laborious to use but even so, it was judged by the British Army that the additional labour was worth the cost.

All told, the British POL supply chain was designed, to provide containerized fuel for the Army. As designed, it was intended for the Army to be able to advance the whole army 75 mi (120 km) using only such reserves held by the field army (the GHQ/Corps areas, and the Divisional Areas). 50 mi (80 km) of fuel would be held by the the Divisions, whilst the Corps areas would hold the remaining 25 mi for the divisions, plus an additional 75 mi for the corps' organic transport.[13]

Having been bulk broken at the Corps or GHQ levels, it was now up to the 2nd line transport units like 90 Coy to then bring those stores forward into the Divisional areas and deliver them to the end-user units. Depending on operational requirements, this may mean delivering it directly to the individual end-users, or it could mean delivering such stores to the units who could then further distribute stores internally. This formed the basic, theoretical structure of the British Army's supply chain; however, just as how no

13. Precis on Lecture "Supplies in War", (Part II) No. 27 (Winter) War Course, 3.

plan survives first contact with the enemy, the supply chain had to adapt to tactical and operational necessities.

Already, you may have noticed that the 27th Armoured Brigade is a *brigade*. Why does it have it's own 2nd line transport? The answer is fairly simple, 27th Armd Bde's full name was 27th Armoured Brigade (Armoured Assault). The Bde was raised as an independent armoured brigade for Overlord. As such, it needed a way to ensure it could run its own logistics. You may also recall how 90 Coy was, on D-Day, delivering both POL as well as ammunition to 27 Armd Bde. This shows how the supply chain had to remain flexible. Whilst in theory, there was a separate chain for POL and ammunition, in practice, this was impossible. This was the advantage of containerized fuel as fuel could simply be loaded into any available lorry.

Finally, before we carry on with the affairs of 90 Coy, it may be prudent to clarify what is meant by a 'dump' and other forms of storage. In a perfect world, supply chains would be perfectly efficient. Ever single item required by an army would be produced when it's needed, sent to where that item was required without delay, and used immediately on receipt. Alas, hiccups invariably appear. Shipping gets stalled, major operations consume unusually large quantities of supplies, supplies are lost to enemy action, etc. Thus, to ensure first-line units receive a continuous flow of supplies, it was — and remains — necessary to store a reasonable reserve of stores at various points along the supply chain.

Ideally, this would be a large, dry, flat, climate controlled warehouse with good transport networks, but alas, conditions in the field often are not always ideally suited to the logistician. Thus, supplies were often stored by stacking supplies in a field or some woodland and covering them with tarpaulins if they required protection from the weather. The

precise requirements of this may seem quite trivial and not terribly important to the profession of fighting wars; however, seemingly trivial tasks such as labelling and organizing are critical. Consider what would happen if there was a German counter attack and the supply officer could not find the 76mm anti-tank shells because their boxes were not properly labelled or because the dump was not given enough land so that the aisles were too narrow. Moreover, what would happen to those same shells if they were dropped and the packaging was inadequate to protect their contents — and honestly, who hasn't dropped a heavy box before. Damage to the shell casing could prevent the casing from ejecting properly after firing leading to a stoppage and possibly leading to the tank being out of action.

Consider also what would happen if one of these these dumps was attacked and caught fire. Aisles do not merely provide access but function as fire breaks. These fire breaks are critical for hazardous material dumps such as POL dumps or ammunition dumps. When these dumps catch fire, it is often too dangerous to attempt to extinguish the fire — POL burns and High Explosives explode. Instead, standard operating procedures tend to relate to containing the fire and letting it burn out on its own.

This may seem small but how do acts like this win wars? Unlike the combat arms, logistics does not win wars by plunging a bayonet into the hearts of the enemy. Instead, logistics wins wars by ensuring the combat arms can act without restrictions. If there is insufficient ammunition or fuel to support an advance, a General cannot order that advance. If reserves are not ready when the enemy attacks, then the combat arms will have few options but to withdraw or fix bayonets. Logistics enables and constrains but achieves nothing on its own but by doing so, is a significant factor in determining if an operation is achievable or foolhardy. Let us return to Normandy in June of 1944 to see this in play.

Logistics Working Practices in Theory

The Structure of Supply
Warehousing

Base Supply Depots

/* Figure out where to incorporate the fact that the British/Canadians focused on firepower over manpower. This means materiel 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

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No. 27 (Winter) War Course, 2017/7 Box 3 File 7. Directorate of History and Heritage Archives (DHH), Ottawa.

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