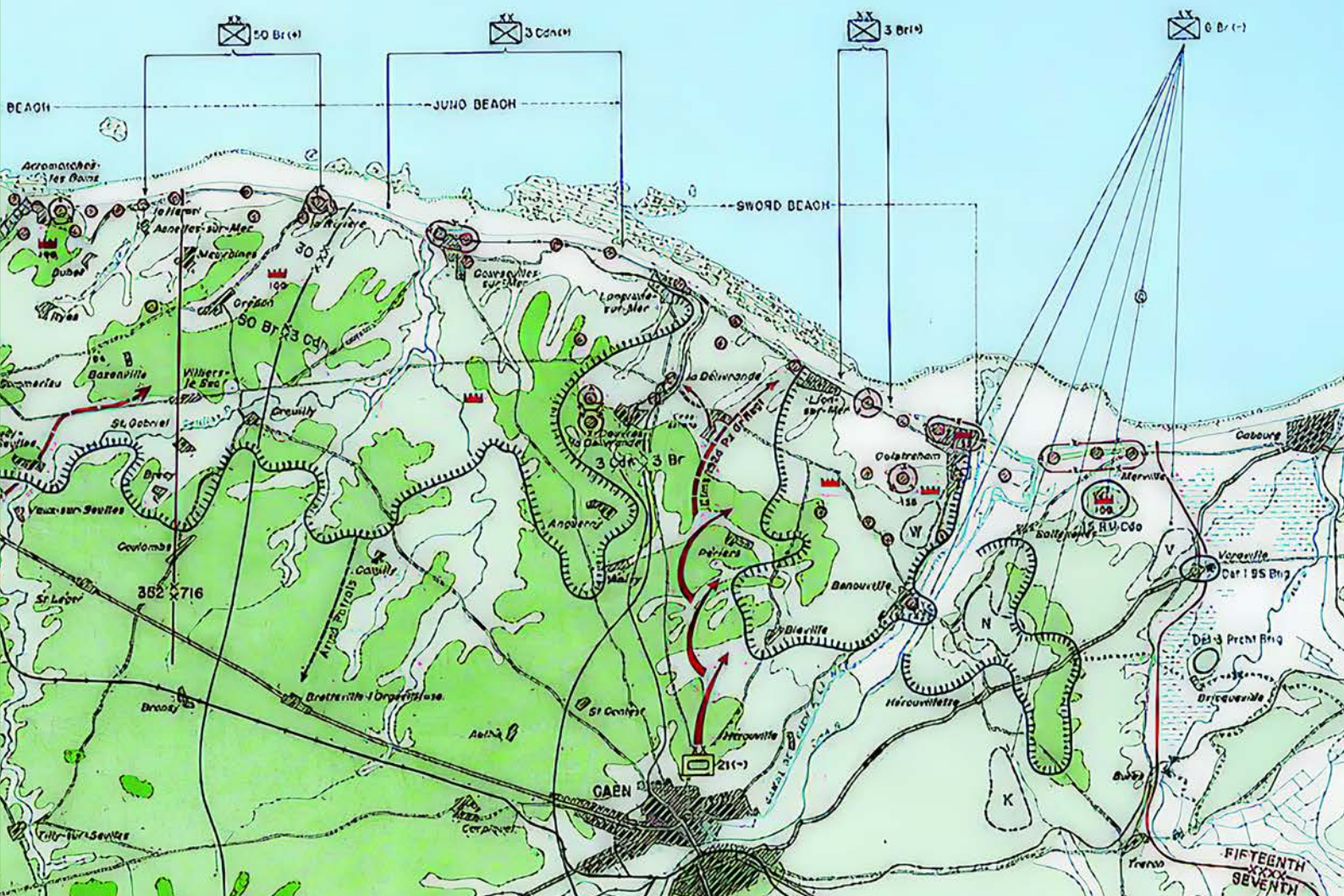




Royal Engineers **Historical Society**

REHS Normandy 80 Battlefield Tour Reading Pack

26 - 29 September 2024



REHS Normandy 80

Battlefield Tour

Reading Pack



26 – 29 September 2024



‘LEADING THE INVASION’¹
Assault Royal Engineers at Lion-sur-Mer on D-Day, 6 Jun 1944.

British Sectors East to West	SWORD		JUNO		GOLD	
	79 Sqn	3 Brit Inf Div	80 Sqn	3 Cdn Inf Div	81 Sqn	50 Inf Div
Assault Squadrons RE	JG Hanson	KduB Ferguson	RT Wiltshire	AE Younger	RE Tompstone	HGA Elphinstone
OC (Maj.)	22 Dragoons	77 Sqn	26 Sqn	82 Sqn	Westminster Dragoons	
Flail Tanks From						

Depicted Here: - Churchill AVRE with petard-Most of 36 on SWORD beach carried devices shown; Beach obstacles with mines - Initial disposal by AVRE team apart from exit making groups; Sherman flail tanks - Their gunnery saved many lives. Rough sea and wind delayed the DD tks, which swam in too late to play their part. The leading Inf LCA also fell far astern; LCT 109, 4 Tp 77 Sqn. Atk gun killed CRE 5Asst Regt, Lt Col ADB Cocks. Only 1 Tk could land.

¹ Source: Lobb D 'Leading the Invasion', reproduction presented to the Squadron by Col K du B Ferguson, DSO TD DL, then a member of 103 Fd Sqn, formerly 50 (Northumbria) Div RE, of the Tyne Electrical Engineers TA on occasion of the Squadrons reformation on 8 Apr 83.

Foreword

Welcome to the Royal Engineers Historical Society (REHS) 'Normandy 80' battlefield tour. As a recently retired chairman of the Society, it is a great privilege to pen a foreword to this excellent Reading Pack composed by Don Bigger, the current Corps Historian and Deputy Chairman of the REHS. I should add here that my own role during the tour is purely a supporting one: I shall provide some overall strategic and operational – joint, multinational and 'combined arms' – context to the main Sapper narrative and analysis of events given by Don, our tour leader.

As you will see from the Contents, the Reading Pack is structured in two parts: while Part I contains general background reading as to D-Day and the Normandy campaign of 1944, Part II comprises a set of specific articles that are directly related to the places we shall visit during the tour on a day-by-day basis. In addition, I would draw your attention to the eight related articles contained in the August 2024 edition of *The Royal Engineers Journal* which cover D-Day 80. In combination with these, both parts of this Reading Pack should provide sufficient detail to give everyone a good understanding of D-Day as a whole and the events we shall describe and discuss on the ground. Furthermore, Don and I hope that the contents of the Reading Pack and our presentations will trigger some lively questions and debates during our time together in France, whether on a beach or in a bar!

Based in the charming town of Bayeux, over three days and 14 stands we shall look at the airborne landings and various actions at the beaches across the British and American sectors, consider bridging and discuss the construction of a Mulberry harbour. In addition, we shall visit the British Normandy Memorial at Ver-sur-Mer and the United States Normandy Memorial and Cemetery at Colleville-sur-Mer, overlooking Gold and Omaha beaches respectively. Hence we will have the opportunity to pay our respects to the fallen.



The British Normandy Memorial at Ver-sur-Mer

Although the events of D-Day and the Normandy campaign took place 80 years ago, studying them is not simply an arcane academic historical exercise. There is some real practical value for serving and retired personnel alike in understanding how such a great enterprise was put together, how the planning and preparation was conducted, and most crucially, how the operation was run, not only on the 'Longest Day' (6 June 1944), but also subsequently during the course of the campaign over the following three months. Although our focus during the tour will be on what happened on D-Day, we should remember that the Germans reacted relatively quickly to the invasion and put up a very determined fight against the Allies in Normandy. The resulting struggle involved a series of costly battles, testing all elements of the extensive military engineer portfolio of tasks in assisting an army (and air force) to live, move and fight.

As I observed in my short introduction to the set of articles in *The Royal Engineers Journal*, the 'actions and events of D-Day and the subsequent campaign in Normandy continue to provide a rich treasure trove of relevant learning'. As readers of this pack will know well, both unit and personal accounts of historical events should offer useful descriptions and perspectives as to particular operations. But they surely can do much more in providing some valuable insights into how – under the supreme test of war against a peer opponent – units and individuals reacted to the unexpected and setback, adapted and then completed their missions. Thus, whatever the organizational, tactical and technical achievements of D-Day and thereafter, in my view the most enduring lessons are those related to how individuals dealt with the challenges they encountered, and what they learned as a result, and, most crucially, what remains relevant for today. To give but one example, the story of the armoured assault engineers overcoming the German beach defences on 6 June 1944 should remain instructional and inspirational for many Sapper generations to come. Yet their success was by no means guaranteed: it depended on technical innovation, hard training and rigorous rehearsal beforehand, together with great courage, cool leadership and professional skill 'on the day'.

In sum, I trust that our Normandy 80 tour will offer not only a convivial and enjoyable Society sojourn, but also provide an interesting and informative stay in an historic piece of ground for which a past generation of soldiers and sappers fought for freedom's cause. When one looks at the current conflict raging between the Russian Federation and Ukraine, one should need no reminder of the human costs of war, and the need to prepare for war in order to prevent one. Yet we seem to take defence and deterrence in NATO largely for granted, notwithstanding the growing risks to our national security. The Allies' success on D-Day and in Normandy was built on a combination of meticulous planning and preparation together with the provision of sufficient resources, coupled with tactical skill and teamwork, valour and versatility during the operation. There were no easy, inexpensive short cuts in this massive effort all round. That is why a study of Normandy 80 remains so highly relevant.

In closing, I would like to take this opportunity to thank Don Bigger for proposing this tour and organising it so thoroughly, including the compilation of this Reading Pack. We should also be most grateful to Nigel Montagu, editor of the *Journal*, who has done such a good job of the final design and typesetting.

As I accompanied Don on the reconnaissance of the tour in May 2024, I know he has some pleasant surprises in store for us. In the meantime, we look forward to meeting and briefing you in France in late September and hearing your views on Normandy 80 – all in the abiding spirit of our REHS motto, namely 'bridging the past to the present for the future'.

Mungo Melvin



Silhouettes of fallen servicemen at the British Normandy Memorial

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REHS NORMANDY 80 BATTLEFIELD TOUR ITINERARY

Day One Thursday 26 September 2024

Timings	Location	Activity	Remarks Feeding Arrangements
1800 – 1810	Campanile Hotel Conference Suite	Tour Welcome and Admin by Don Bigger	
1810 – 1840	Campanile Hotel Conference Suite	Normandy – Setting the Scene by Mungo Melvin	Includes questions
1840 – 1900	Campanile Hotel Conference Suite	Briefing for Day Two by Don Bigger	
1900	Campanile Hotel Conference Suite	Communal Ice Breaker Dinner	Dinner included in cost of tour – three course dinner pre-ordered, includes wine and cidre and selection of Normandy cheeses List of tour members choices will be available on the night

Day Two Friday 27 September 2024

Timings	Location	Activity	Remarks Feeding Arrangements
0815 – 0900		Coach journey from Bayeux to Troarn	
0900 – 0930	Stand One Bridge over River Dives East of Troarn	Introduction by Mungo Melvin Brief on the actions of 3 Para Sqn RE on the morning of D- Day by Don Bigger	Input from Andrew Roseveare
0930 – 0950		Coach journey from Troarn to Pegasus Bridge Memorial Museum	Toilets available
0950 – 1025	Stand Two A Benouville Bridge	Introduction by Mungo Melvin. Brief on Coup de Main operations at Benouville and Ranville bridges by Don Bigger	
1025 – 1030		Walk from Benouville Bridge to Pegasus Memorial Museum	

Day Two Friday 27 September 2024 (Cont)

Timings	Location	Activity	Remarks and Feeding Arrangements
1030 – 1130	Stand Two B Pegasus Bridge Memorial Museum	Museum Guided Tour	
1130 – 1145		Walk from Pegasus Bridge Memorial Museum to 17 Fd Coy RE Memorial	
1145 – 1205	Stand Two C 17 Fd Coy RE Memorial	Bridging the River Orne and the Caen Canal by Don Bigger	
1205 – 1215		Walk from 17 Fd Coy RE Memorial to Les 3 Planeurs Brasserie	Toilets available
1215 – 1315	Les 3 Planeurs Brasserie	Lunch	Packed lunch provided by the hotel, tea, coffee or soft drink along with a patisserie covered in the cost of the tour. Brasserie is content we can eat our packed lunch on the premises as we are purchasing food and drink
1315 – 1330		Coach journey from Pegasus Bridge Memorial Museum Car Park to Merville Battery	Toilets available
1330 – 1445	Stand Three Merville Battery	Introduction by Mungo Melvin. Brief on the assault on Merville Battery by 9th Para Bn and elements of 591 (Antrim) Para Sqn RE by Don Bigger followed by self-guided tour of the battery	Programme includes time for tour members to visit casemate displays
1445 – 1500		Coach from Merville Battery to Ranville CWGC	
1500 – 1530	Stand Four Ranville CWGC	Brief on the CWGC, the experiences of 591 (Antrim) Para Sqn RE and 1st Bn RUR on D-Day by Don Bigger	Programme includes time for tour members to look at gravestones and tour the cemetery
1530 – 1600		Coach journey to Le Ferme De Billy, Cidre House	
1600 – 1700	Le Ferme De Billy	Cidre tasting – a true Normandy experience!	Included in the cost of the tour, Toilets available
1700 – 1730		Coach journey from Le Ferme de Billy to Premier Classe Hotel, Bayeux	
1800 – 1830	Campanile Hotel Conference Suite	Tour Party brief for day three	

Day Three Saturday 28 September 2024

	Location	Activity	Remarks and Feeding Arrangements
0820 – 0900		Coach journey from Bayeux to Hermanville	
0900 – 0940	Stand Five SWORD Beach, QUEEN WHITE Sector	Introduction on the German perspective and 3rd BR Div plan by Mungo Melvin. SWORD Beach, QUEEN WHITE Sector – 1st South Lancs Regt and 77 Asslt Sqn RE by Don Bigger	
0940 – 0950		Coach journey from Hermanville to AVRE Memorial in Lion sur Mer	
1000 – 1020	Stand Six AVRE Memorial, Lion sur Mer	The story of Capt McLennan, 77 Asslt Sqn RE supporting 41 RM Commando assault into Strongpoint TROUT. Experiences of Heer STUG Troop on D-Day by Don Bigger	
1020 – 1050		Coach journey from Lion sur Mer to Juno Centre, Courselles sur Mer	Toilets available
1050 – 1215	Stand Seven Juno Centre	JUNO Centre – 3rd CAN Div MIKE RED / GREEN Sector – initial brief by Don Bigger followed by guided tour of German fortifications and JUNO Centre audio visual presentation	Tour Party will need to split into two groups
1215 – 1345	Courselles sur Mer	Lunch Break	Packed lunch provided by hotel. Opportunity to walk into Courselles sur Mer town centre and use the cafes and shops
1345 – 1355		Coach journey from Juno Centre car park to AVRE 1C	Brief on Charles de Gaulle Memorial enroute
1355 – 1415	Stand Eight AVRE 1C	The experiences of the crew of AVRE 1C on D-Day by Don Bigger	
1415 – 1435		Coach journey from AVRE 1C to Arromanches	
1435 – 1505	Stand Nine A Arromanches	Arromanches – MULBERRY Harbour, PLUTO and support to the RAF by Don Bigger	

Day Three Saturday 28 September 2024 (Cont)

Timings	Location	Activity	Remarks and Feeding Arrangements
1505 – 1540	Stand Nine B Arromanches 360 Degrees Cinema	Arromanches 360 Degrees Cinema	
1540 – 1600	Stand Nine C Corps Memorial	Corps Memorial Wreath laying Service	Wreath laid by Mungo Melvin
1600 – 1615		Coach Journey from Arromanches to Vers Sur Mer	
1615 – 1725	Stand Ten British Normandy Memorial	British Normandy Memorial, Vers Sur Mer, Wreath Laying Service, wreath laid by Nick Cavanagh	Timings allow ten minutes each for walking to and from the Memorial, ten minutes for the Wreath Laying Service and forty minutes to view the Memorial
1725 – 1800		Coach journey from Vers sur Mer to Premier Classe Hotel, Bayeux	
1815 – 1845	Campanile Hotel Conference Suite	Tour Party brief for day four	
2000 – 2200	Bayeux	Communal End of Tour Dinner	Hôtel Lion d'Or Bayeux

Day Four Sunday 29 September 2024

Timings	Location	Activity	Remarks and Feeding Arrangements
0800 – 0850		Coach journey from Bayeux to Pointe du Hoc	
0850 – 0950	Stand Eleven Pointe du Hoc	Brief on US 2nd Ranger Bn (-) assault on German battery at Pointe du Hoc by Don Bigger	Toilets available. Concern over access and distance for those less able – alternative is the small display in the visitor centre and the display board outside this centre
0950 – 1010		Coach journey from Pointe du Hoc to Vierville sur Mer	
1010 - 1040	Stand Twelve OMAHA Beach West	MULBERRY Harbour A, the German defences and the experiences of 29th Inf Div (US National Guard) on D- Day by Mungo Melvin	
1040 – 1110		Coffee stop at Vierville sur Mer	At tour members own expense
1110 – 1130		Coach journey from Vierville sur Mer to Coleville sur Mer	

Day Four Sunday 29 September 2024 (Cont)

Timings	Location	Activity	Remarks and Feeding Arrangements
1130 – 1230	Stand Thirteen German Strongpoint WN 62	WN62 OMAHA Beach – US 1st Inf Div and 5th Special Engr Bde – FOX GREEN Sector by Don Bigger	Concern over access and distance for those less able, option to stay on coach and walk down to WN62 rather than up to WN62 from the shoreline
1230 – 1310	US War Cemetery OMAHA Beach Coach Park	Lunch break	Packed lunch provided by hotel. Note that there are limited café facilities at the locations on Sunday morning. Tour members may wish to buy snacks to supplement their packed meals in Bayeux on Saturday
1310 – 1410	Stand Fourteen US War Cemetery OMAHA Beach	Guided tour of US War Cemetery to include BGen Roosevelt and the story of the Niland brothers (Band of Brothers)	Toilets available.
1410 – 1425	US War Cemetery OMAHA Beach	Tour Summary by Mungo Melvin	
1425		Tour disperses – Coach proceeds to drop off at Cherbourg Ferry Terminal	Stop at Service Station enroute to Cherbourg

Abbreviations

From the National Archives, catalogue number WO 171/1383

116749	Map Reference
1/RUR	1st Battalion The Royal Ulster Rifles
2 i/c	Second-in-Command
52nd	2nd Battalion The Ox and Bucks Light Infantry
AA	Anti-Aircraft
AD	Airborne Division
Adj	Adjutant
Adm	Administration
ADS	Advanced Dressing Station
Air	Airborne
Airldg	Airlanding
AL	Airlanding
ALB	Airlanding Brigade
Amb	Ambulance
Arnn	Ammunition
AP	Anti-Personnel
Armd	Armoured
Arty	Artillery
A/Tk	Anti-Tank
Att	Attached
BB	Blitz Buggy
Bde	Brigade
Bdy	Boundary
BHQ	Battalion Headquarters
Bn	Battalion
Br	Bridge
Brit	British
Bty	Battery
CA	Counterattack
CB	Counter Battery
Cdn	Canadian
CE	Church of England
Circs	Circumstances
CO	Commanding Officer
Comd	Command
Comdr	Commander
Cornn	Communication
Conc	Concentration
Coy	Company
Def	Defence
DF	Defensive Fire
Dist	District
Div	Division / Divisional
DZ	Drop Zone
Est	Established / Establishment
Fd	Field

FDL	Forward Defended Locality
FFI	Forces Françaises de l'Intérieur (French Resistance)
Fm	Farm
Fmn	Formation
FOB	Forward Observation Bombardment
FOO	Forward Observation Officer
FUP	Forming Up Place
Fwd	Forward
Gp	Group
Gr	Ground
GR	Grenadier Regiment
Gren	Grenadier
H	Highland
HD	Horse-drawn
HE	High Explosive
HMG	Heavy Machine Gun
I	Intelligence
i/c	In-Command
Imm'ly	Immediately
Ind	Including
Inf	Infantry
Infm	Information
Instrs	Instructions
Intercomm	Intercommunication
10	Intelligence Officer
June	Junction
Ldg	Landing
LMG	Light Machine Gun
Lt	Light
LZ	Landing Zone
Maint	Maintenance
m/c	Motorcycle
MOS	Main Dressing Station
Med	Medium
MG	Machine Gun
MMG	Medium Machine Gun
MO	Medical Officer
Mob	Mobile
MT	Motor Transport
MTO	Motor Transport Officer
NAAFI	Navy Army Air Force Institute
OC	Officer Commanding
Offr	Officer
O Group	Orders Group
OO	Operation Order
OP	Observation Post / Operation (if lower case)
Opp	Opposite
Oppn	Opposition
Oxf & Bucks Lt Infy	Oxfordshire and Buckinghamshire Light Infantry

OR	Other Ranks
Ord	Ordnance
Org	Organisation
Pdr	Pounder
Pb	Photograph
Pl	Platoon
POL	Petrol, Oil and Lubricants
Posn	Position
Poss	Possible
PT	Physical Training
PW	Prisoner of War
Pz	Panzer
QM	Quartermaster
RA	Royal Artillery
RAMC	Royal Army Medical Corps
RAP	Regimental Aid Post
Rd	Road
RE	Royal Engineers
Ree	Recovery
Reed	Received
Ref	Reference
Reg/ Regt	Regiment
Res	Reserve
Rfts	Reinforcements
RJ	Road Junction
RPG	Rounds per Gun
Rt	Right
Rte	Route
RUR	Royal Ulster Rifles
Rwy	Railway
SA	Small Arms
SAA	Small Arms Ammunition
Sec	Section
Shellreps	Shell reports
Sigs	Signals
SIT NOR	Situation Normal
SOS	Save our Souls
SP	Self-Propelled
Sqn	Squadron
SS	Special Service
Str	Strength
TCV	Troop Carrying Vehicle
Tp	Troop
Tpt	Transport
Trg	Trining
Vis	Visibility
WY	Worcestershire Yeomanry
Xrds	Crossroads



The British Normandy Monument

OPERATION OVERLORD – AN OVERVIEW

Task: You will enter the continent of Europe and, in conjunction with the other United Nations, undertake operations aimed at the heart of Germany and the destruction of her armed forces. The date for entering the Continent is the month of May 1944. After adequate Channel ports have been secured, exploitation will be directed towards securing an area that will facilitate both ground and air operations against the enemy.

– Combined Chiefs Directive to Supreme Commander Allied Expeditionary Force (SHAEP)

The most difficult and complicated operation ever to take place.

– Sir Winston Churchill, British Prime Minister

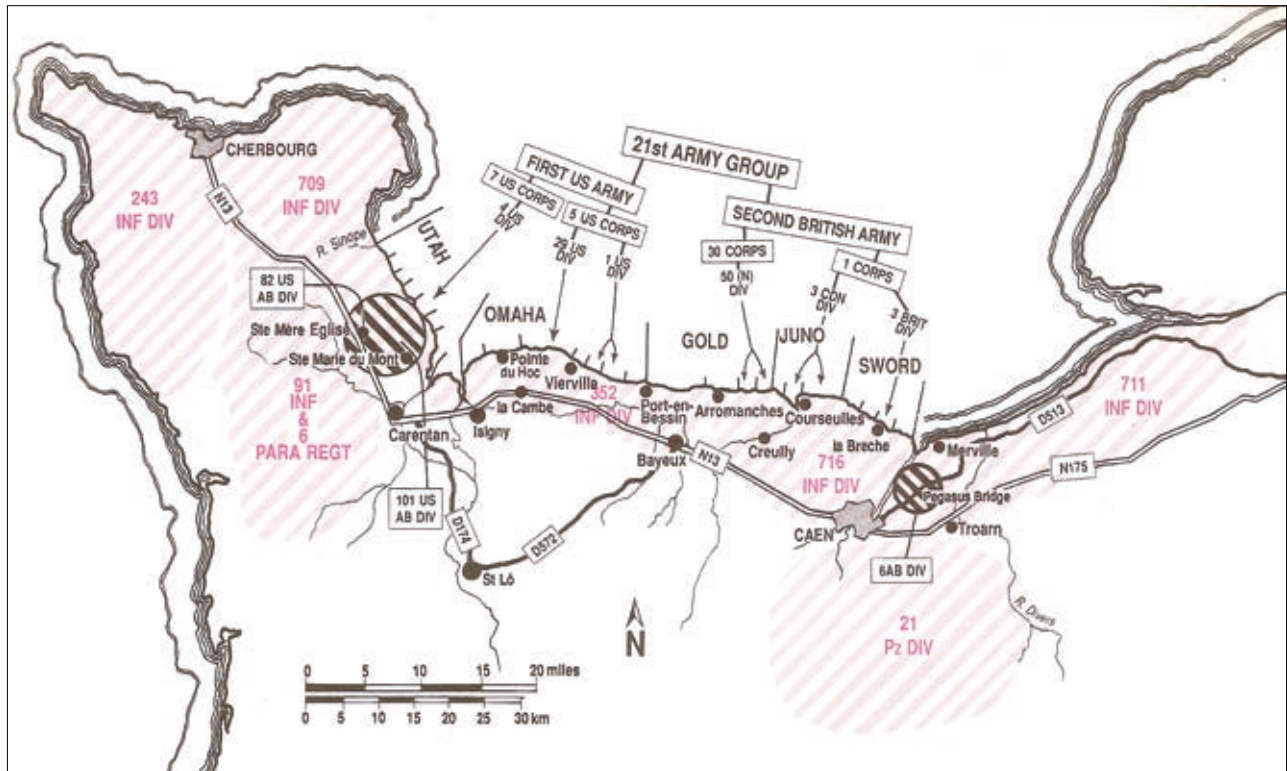
The decision to invade Europe via Normandy was made for reasons relating to both the assault and the establishment of a bridgehead afterwards. After the disastrous Dieppe raid of 1942 seizing a port directly was discounted. Therefore, an assault would have to be made across the beaches. To ensure air superiority it was also decided that any beaches needed to be within range of the majority of the Allied fighter aircraft. This narrowed the invasion area down to the coasts of Holland, Belgium and Northern France. The Dutch coast was discounted because its hinterland could be easily flooded making a breakout extremely difficult. The open Belgium coast would be difficult to defend during the build up of the bridgehead. The Pas-de-Calais was discarded because it was heavily defended and was too obvious a choice. Thus, Normandy was chosen.

The plan for the Allied assault was codenamed Operation OVERLORD and was destined to be the greatest amphibious operation the world has ever seen. The Supreme Commander for the invasion was General Dwight D Eisenhower who appointed General Bernard Montgomery to command 21st Army Group consisting of all British and American land forces. The plan was to invade with five Infantry and three Airborne Divisions and assault over 50 miles of the Normandy coast. General Omar Bradley's US First Army would land at UTAH and OMAHA beaches in the west, with US 4th Infantry Division landing at UTAH at the foot of the Cotentin Peninsula and US 1st Infantry Division, backed by US 29th Infantry Division, at OMAHA. UTAH beach would then be used as the launch pad for subsequent operations to cut the Cotentin Peninsula, isolate, and then capture Cherbourg, thereby hopefully providing the Allies with an operational port. To ensure success, 82nd and 101st Airborne Divisions would be dropped inland from UTAH in the area of Saint-Mere-Eglise to protect the flanks and secure crossings over the flooded Merderet Valley that would be needed during a speedy breakout from the beach area. In the east, General Miles Dempsey's Second British Army would land at GOLD, JUNO, and SWORD beaches, with 50th (Northumbrian) Infantry Division at GOLD, 3rd (Canadian) Infantry Division at JUNO and the British 3rd Infantry Division at SWORD. Their mission was to seize the city of Caen that would then provide a pivot for the sweep east towards the River Seine and Paris. To assist this task the British 6th Airborne Division was to be dropped at the extreme eastern end of the invasion area in order to secure a small bridgehead east of the River Orne, between Caen and the sea, and prevent enemy interference from this flank.

Allied air power was to be used to cut off Normandy from the rest of France, with particular attention being paid to the railway infrastructure to prevent the Germans reinforcing the area. This part of the plan was put into effect many months before the actual invasion. However, in order to avoid compromising true Allied intentions three bombs were dropped on the Pas-de-Calais for every one that was dropped on Normandy. The Allied air campaign, known as the 'Transportation Plan' would be crucial if the Germans were to be prevented from carrying out any strategic or operational manoeuvre during the first few days of the invasion.

Only the Supreme Commander could give the order to invade and during the first days of June 1944. Eisenhower agonized over that decision. SHAEP planners had chosen 5, 6 and 7 June as the dates that met their requirements for a successful landing – a late-rising moon followed by a low tide at dawn. Favourable tide conditions would not occur again until 18–20 June and a full moon would not be for another month. Eisenhower had chosen the earliest date Monday 5 June for the assault, but adverse weather reports early in the morning of the 4 June forced him to

postpone the attempt. He decided that the high seas and overcast skies would jeopardize the success of any landing attempted that morning. Of his senior advisers, only Montgomery advised against postponement. As it was, his order to delay turned back ships that had already sailed from ports in northern England.



The Operation OVERLORD invasion area. Approximate German dispositions are also shown.

At 2130 hours on the evening of 4 June, Eisenhower met with his staff in the library of Southwick House to learn that the stormy weather forecast for the Normandy coast had in fact materialized. However, Group Captain J M Stagg RAF, the chief SHAEF meteorologist, proceeded to forecast a 2-day window of relatively good weather lasting through Tuesday 6 June. Eisenhower was faced with a cruel choice. If the ships sailed again and were again turned back there could be no effort on the 07 June because they could not be refuelled in time. A postponement until the 19 June would demoralize the troops on the crowded ships and possibly compromise the tight security surrounding the invasion plans. Eisenhower weighed the consequences in silence for 15 minutes, and then spoke: *'I am quite positive we must give the order. I don't like it, but there it is. I don't see how we can do anything else.'* He met again with his staff in the early hours of the next day to review his decision. After 45 minutes, he gave the order: *'OK – let's go!'* It was 0415 hours Monday, 5 June 1944.

Soldiers, Sailors, and Airmen of the Allied Expeditionary Force. You are about to embark upon the Great Crusade, toward which we have striven these many months. The eyes of the world are upon you. The hope and prayers of liberty-loving people everywhere march with you...Your task will not be an easy one. Your enemy is well trained, well equipped and battle-hardened. He will fight savagely. But this is the year 1944...The tide has turned! The free men of the world are marching together to Victory! I have full confidence in your courage, devotion to duty and skill in battle. We will accept nothing less than full Victory! Good luck! And let us all beseech the blessing of Almighty God upon this great and noble undertaking.

– General Dwight D Eisenhower, Order of the Day on 6 June 1944

THE NORMANDY DEFENCES

If we are not in a position to throw the English and the Americans back into the sea within seventy-two hours, then not only is this campaign lost, but also the war itself.

– General Heinz Guderian, Inspector General of the German Armoured Forces

The strength of the defences was absurdly overrated. The 'Atlantic Wall' was an illusion, conjured up by propaganda – to deceive the German people as well as the Allies. It used to make me angry to read the stories about its impregnable defences. It was nonsense to describe it as a 'wall'.

– *Generalfeldmarschall*¹ Gerd von Rundstedt, Commander Army Group West speaking after the war

The Germans and the 'Atlantic Wall'

Up until the end of 1941 the only German fortifications along the French Atlantic coast were seven heavy coastal batteries between Boulogne and Calais and a few naval coastal batteries and fortified U-boat pens. In September 1941 a reconnaissance of defence sites had begun along the coast as a first step towards construction, but this was all that could be done at the time because of the shortage of labour and materiel. Then, early in March 1942, Hitler appointed *Generalfeldmarschall* Gerd von Rundstedt as Commander Army Group West and issued his basic order for a defence of the Atlantic and Channel coasts. *Wehrmacht* High Command (*Oberkommando der Wehrmacht* – OKW) now had responsibility for this task and in his directive to OKW, Hitler ordered that the coastal defences be organized and troops so deployed that any Allied invasion would be halted on the coast or shortly thereafter.

Initial plans for the defence of northern France were drawn up by the Inspectorate of Engineers (*Inspectorate 5, Pionierabteilung*) at Hitler's Headquarters. The *Führer* then set the priorities: first the major ports, Le Havre, Boulogne, Caen, and Cherbourg; then the heavy coastal batteries; then the sector of the Fifteenth Army, beginning just east of Caen and including Boulogne; and finally, the sector of the Seventh Army defending the area westward to the Atlantic. He also decided upon allocations of available cement: the major ports had the highest priority; the rest being divided amongst the branches of the *Wehrmacht* to complete their various construction projects.



Keeping watch over the Channel.

In the summer of 1942 Hitler estimated that ten to twelve additional divisions would be needed for the defence of areas considered most suitable for large-scale surprise landings. Where possible, these locations were to be defended by strongpoints tied in with existing coastal batteries. The rest of the coastline would be covered by army patrols. Hitler decided to expand his notion of an 'Atlantic Wall' and in September 1942 he ordered fortifications along the French coast similar to the Siegfried Line along the Franco-German frontier. This new wall would consist of 15,000 concrete strong points manned by 300,000 men. Each strongpoint, many designed by Hitler himself, would house 30 to 70 men, be armed with machine-guns and anti-aircraft weapons and be able to withstand air bombardment and navel shelling. The intervening ground would

be covered by a continuous belt of interlocking fire coming from these structures, making any invasion impossible.

Hitler ordered that these tasks were to be completed by 1 May 1943. However, Albert Speer, now head of the *Todt* Organization, the German construction firm, thought that he would be lucky to get 40% of the defences finished by that time. Despite this, Hitler then assigned construction priority to

¹ Field Marshal.

those portions of the Atlantic Wall defending rocket-launching areas and not the likely invasion beaches! Indeed, even the strongest fortified portion of the French coast never became anything like the impregnable fortress that Hitler desired, though he continued to believe it to be so. In fact, he never actually inspected any portion of the Atlantic Wall, nor set foot again on French soil until June 1944, a week after D-Day!

In November 1943, *Generalfeldmarschall* Erwin Rommel, under the nominal command of von Rundstedt, was selected by Hitler to speed up completion of the coastal defences and to command the initial resistance in case of an Allied landing. However, Rommel and von Rundstedt clashed repeatedly over the best strategy for defending against invasion. Von Rundstedt thought that the Allies could only be defeated in the open country of France, while Rommel thought that they would have to be defeated on the beaches. Actually, given the strength of the Allied invasion, the problem of defence in the West was insoluble. Unfortunately for the Germans, much of their planning ultimately proved of little practical value, as a decision was never made between the two concepts of defence and many costly projects proved useless.



Rommel inspects the beach defences of the Atlantic Wall

For example, in late 1943 von Rundstedt had ordered a so-called *Zweite Stellung*, or second position, to be built a few kilometres from the coast in order to give the earlier coastal defences some depth. This was in addition to the staking of open fields in the interior to deter glider and parachute landings. But in April 1944 Rommel ordered all work halted, preferring to concentrate on coastal defences. Under the command of General Wilhelm Meise, Rommel's senior engineer, the priority then became the emplacement of beach obstacles such as tetrahedral or hedgehogs, and 'Belgian Gates' – barricade-like underwater obstacles – all interspersed with mines. Rommel also planned to supplement these obstacles by laying 50 million mines in the channel and on the beaches. Consequently, between late 1943 and January 1944 sixteen minefields, each about 8km long were put down between Boulogne and Cherbourg. They were supplemented by hasty minefields emplaced offshore, immediately before the invasion was expected. From Zeebrugge in Belgium to Granville in France, a further 36 underwater minefields were also planned. Finally, shallow-water mines were laid using a special 70kg concrete mine developed for the purpose. Fortunately for the Allies, of the 50 million mines needed for a continuous defence along the coast, only 5 million had been sown by D-Day.

The accomplishment of these ambitious plans called for abundant labour, but manpower had become increasingly scarce in the German Army. The famed Todt Organization was already fully engaged in fortifying the major ports along the Channel and the Atlantic coast. Because many in the High Command expected the main Allied blow to fall in the Fifteenth Army's sector, including the Pas-de-Calais area, it received the priority in labour and materiel. The bulk of the remaining labour supply – the so-called *Hilfsfreiwillige* or '*Hiwis*' who were 'volunteer' Russian prisoners – were also assigned there. Consequently, the Seventh Army had to complete its defences despite shortages of labour and materiel. It is quite ironic that the main Allied landing was to take place in this Army's sector.

However, the Seventh Army was not entirely neglected. In January 1944 its LXXXIV Corps received three engineer battalions, two for fortress construction and one for mine laying. In addition, 2,850 men of the former French Labour Service were employed on a secondary defence line immediately behind the belt of coastal resistance points. As shortages became more acute, two 'East Battalions' of captured Russian soldiers were also attached.

The remaining source of labour for engineering tasks came from the combat troops. For instance, a reserve battalion of the veteran 709th Infantry Division was required to devote three days each week to labour duty at the expense of much needed training. Indeed, in February 1944 Rommel even ordered that all infantry in LXXXIV Corps divisions were to be engaged in the construction of defences ordinarily performed by engineer troops. Only the 3rd and 5th *Fallschirmjäger*² Divisions of II *Fallschirmjäger* Corps' were to be exempt from such tasks.



Heavily fortified stretch of the Normandy coast.

Despite all these efforts, on the eve of D-Day there was only a maximum of seventy-three large-calibre guns located in fixed concrete emplacements and capable of firing on an Allied attack. On the east coast of the Cotentin Peninsula, strongpoints and resistance nests were spaced about 800m apart, but between there and the Rivers Orne and Vire they were about 1,800m apart. Most of these were field fortifications, sometimes with concrete troop shelters, and casemated guns. Many of them were far from complete. For example, in the 352nd Infantry Division's sector overlooking OMAHA beach, only 15% of the coastal positions had been bomb-proofed; the rest remained unprotected. Because of Hitler's earlier delay in initiating it, and shortages of labour and materiel, Rommel had been unable to complete the Atlantic Wall. This undoubtedly contributed to the success of the Allied landings during D-Day.

² Parachute.

THE BRITISH AIRBORNE LANDINGS

Role of the 6th Airborne Division

The 21st Army Group outline plan was to assault simultaneously the beaches on the Normandy coast between the Carentan estuary and the River Orne in order to seize a lodgement area. Once firmly established, General Montgomery planned to develop a threat of breakout on the eastern flank in the Caen area. His intention was to draw and then contain the enemy armoured reserves on this flank, using the British and Canadian Armies. Having achieved this, the American Armies under General Bradley were to launch the main breakout thrust southwards down the Loire Valley, thence eastwards whilst the front pivoted around Caen.

The Plan

The 6 Airborne Division (6 AB Div) under command of I Corps was given the important role of covering the left flank of the 21st Army Group. This required:

- ⊕ Capture of the bridges over the Caen Canal and River Orne. To enable the push towards Caen to be developed these bridges were needed intact on D-Day.
- ⊕ Destruction of the Merville Battery. As it was not certain that the battery could be neutralised by heavy bombing alone, it had to be seized and silenced before the assault craft came within range.
- ⊕ Destruction of bridges over the River Dives at Varaville, Robehomme, Bures, and Troarn in order to delay enemy reinforcements coming from the east into the beachhead. These bridges had to be blown.

Without prejudice to the above tasks and as soon as resources permitted, the Division was then to develop operations east of the River Orne in order to:

- ⊕ Secure the area between the River Orne and River Dives north of the road between Troarn to Sannerville to Colombelles.
- ⊕ Delay enemy reinforcements attempting to move against the Division from the east.

The whole plan was codenamed Operation TONGA.

What Happened On D-Day



Maj J H Howard.

At 0016 hours on the morning of the 6 June 1944, the first troops of 6 AB Div landed on mainland France. They were the six gliders carrying Major John Howard's D Company Group of 2nd Battalion Oxfordshire and Buckinghamshire Light Infantry (2 OX & BUCKS). The gliders landed meters from Howard's first objective, the Bénouville Bridge over the Caen Canal. Within 10 minutes the bridge, later re-named 'Pegasus' Bridge, and that over the River Orne 400 m to the east had been captured intact.

At 0050 hours, 5th Parachute Brigade (5 PARA Bde) dropped onto Drop Zone (DZ) 'N' east of Ranville. 7th Battalion The Parachute Regiment (7 PARA) was tasked to move immediately over the bridges taken by Major Howard's men and consolidate defensive positions at Bénouville and Le Port. Despite continual shelling and repeated German attacks, they held their positions until relieved by troops of 1st Special Service Brigade (1 SS Bde) advancing from SWORD beach. 13 PARA set about clearing enemy outposts from the north of Ranville and were established in positions overlooking the DZ by about 0400 hours. Meanwhile, 12 PARA had a longer distance to cover and moved to the south of Ranville with barely fifty per cent



DZ 'N' at RANVILLE strewn with gliders

of their force. They encountered no enemy interference and, by 0400 hours, they too were in position and covering the southern approaches to the village. 3 PARA Bde were split to land at DZ 'V' west of Varville in anticipation of the assault on the Merville Battery and DZ 'K' southwest of the Bois-de-Bavent. The Brigade had a hard and confusing day. They were dispersed on the parachute insertion but fought with whatever forces they could muster to achieve their two main objectives. These were to neutralise the battery at Merville and to destroy the

bridges over the River Dives. All the bridges were demolished in the early hours of D-Day by the Sappers of 3rd Parachute Squadron Royal Engineers (3 Para Sqn RE), supported by troops from 1st (Canadian) Parachute Battalion (1(CAN) PARA) and 8 PARA. All actions were feats of great daring and tenacity and did much to deny the enemy the opportunity of reinforcing west of the River Dives.

In the north at Merville, 9 PARA, commanded by Lieutenant Colonel Terence Otway, was engaged in one of the most formidable actions of the landings. Dispersed over a wide area the Battalion had to regroup, march, and neutralise the heavily fortified Merville coastal gun battery. Two hours after the drop only one hundred and fifty of the six hundred strong unit had reached the RV and with time running short Otway decided to move off. In spite of wire, mines, and antitank obstacles, the Battalion successfully assaulted the battery. At the close of this action, 9 PARA was only eighty strong.

At 2100 hours on 6 June, with all landed elements still engaged in bitter fighting with the enemy, the 6 Airlanding Brigade landed on Landing Zones (LZs) 'N' and 'W' either side of the Caen Canal and River Orne. The Brigade consisted of 1st Battalion The Royal Ulster Rifles (1 RUR) and the remainder of 2 OX & BUCKS. Only one company of the Brigades' other battalion, 12th Battalion The Devonshire Regiment (12 DEVONS) could be airlifted on D-Day and were not expected to arrive until the afternoon of the following day. The Brigade's first task was to seize and hold the



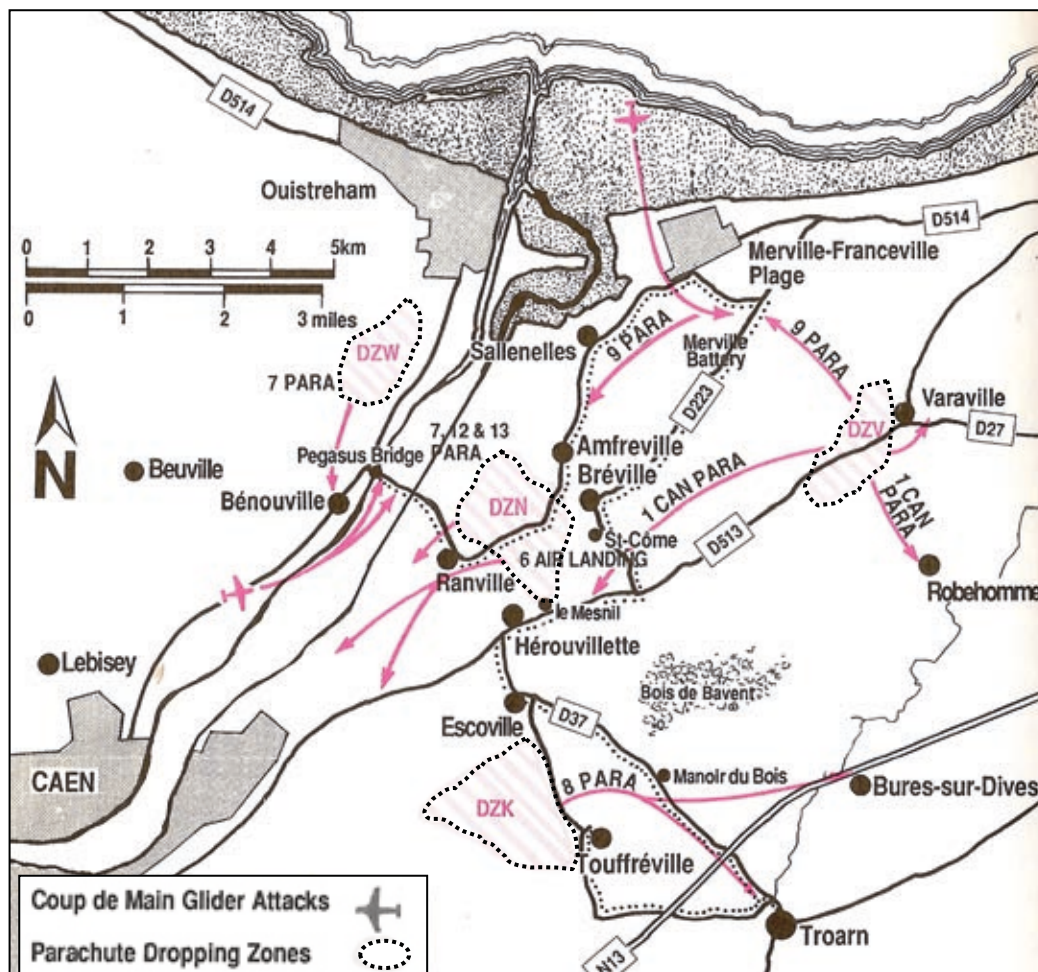
A fully laden 1 RUR jeep moves off from LZ 'N'

village of Longueval south of Ranville, which offered a direct view onto the two bridges. This task was given to 1 RUR who by the early hours of the 7 June held the village. To the southeast of Ranville lay Escoville, an isolated town easily defensible because of the wide, open approaches to its buildings. Escoville was assaulted by 2 OX & BUCKS in the early hours of 7 June. Bitter fighting took place and heavy losses meant the Battalion was ordered to consolidate north of the original objective at Hérouvillette.



Men of 1 SS Bde (wearing berets) meet up with paratroopers of 6 AB Div (wearing helmets) in the River Orne bridgehead.

Bitter fighting continued in the Bois-de-Bavent for many days, often against German forces well supported by armour and self-propelled (SP) guns. Patrols and raids constantly harried the enemy but the village of Bréville did not finally fall into the Division's hands for good until 12 June. Once the breakout began in late August 1944, 6 AB Div commenced Operation PADDLE, the fast-moving advance to the River Seine through Dozulé and Pont L'Evêque.



6 AB Div movements east of the River Orne, 6 June 1944

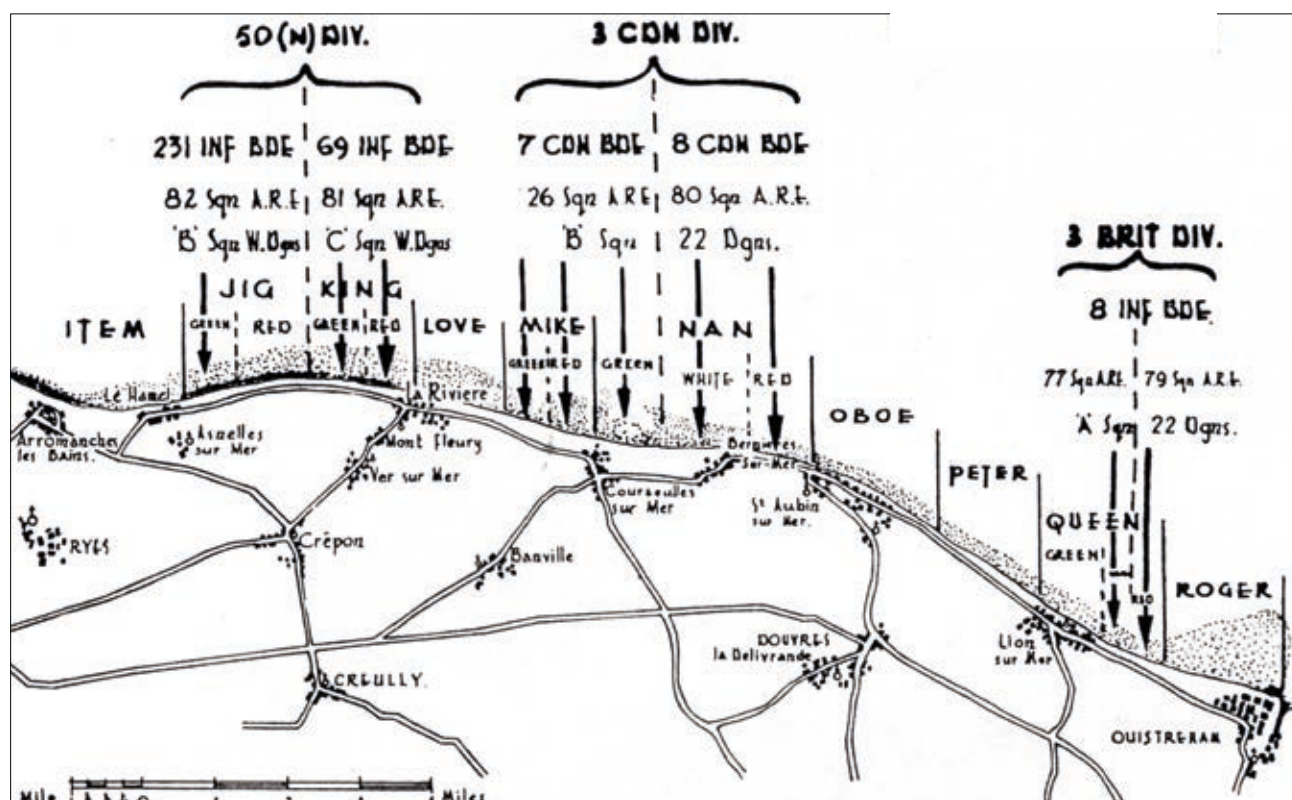
THE BRITISH SEABORNE LANDINGS

We have a long sea journey and at the end of it all we will have to land on an enemy coast in the face of determined opposition. The violence, speed and power of our initial assault must carry everything before it.

– General Bernard Montgomery
General Officer Commanding 21st Army Group speaking to troops before D-Day

The Plan

From west to east, the British landings would take place on three beaches codenamed GOLD, JUNO, and SWORD, each of which was allocated to a division to assault. The beaches were divided into a number of landing sectors that were further split into RED (left), GREEN (right) and sometimes, a WHITE (centre) section. Each coloured sector was in turn allocated a Battalion Group to assault. The planning for the invasion was meticulous and involved months of recce, preparation, and



The British Landing Beaches – GOLD, JUNO, and SWORD

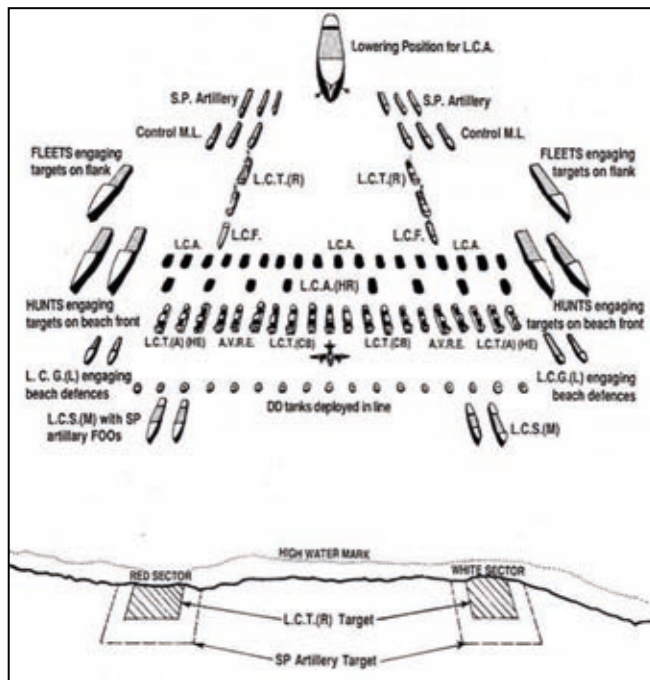
rehearsal. To give an idea of the thoroughness of the planning and the weight of resources involved, the following landing plan was much the same for all the British beaches:

- ⊕ **H - 7 hours:** RAF bombers start attacks on German positions, in particular the main coastal batteries.
- ⊕ **H - 75 minutes:** RAF bombing ceases.
- ⊕ **H - 60 minutes:** US Air Force bomb beach defences; Naval Bombardment Groups open fire on coastal batteries and main defensive positions.
- ⊕ **H - 15 minutes:** LCT(R) and LCT(A)(HE) with SP artillery (25-pdr Sexton armoured vehicles) open fire when in range of the shore.
- ⊕ **H - 5 minutes:** 16 x DD tanks, launched from 4 x LCT, swim ashore.
- ⊕ **H - Hour:** 4 x LCT, carrying the specialist armour (the 'Funnies') and Royal Engineer

Assault units land and begin work on the beach obstacles.

- ⊕ **H + 7 minutes:** 8 x LCA bearing the two leading infantry Companies come ashore with the first wave.
- ⊕ **H + 20 minutes:** 8 x LCA, with two more infantry companies, land the second wave.
- ⊕ **H + 25 minutes:** 2 x LCA land the men of the Beach Group responsible for the command and control of the beaches.
- ⊕ **H + 35 minutes:** Bulldozers and more specialist armour landed.
- ⊕ **H + 60 minutes:** 9 x LCT with SP guns, Bren-gun carriers and SP anti-tank guns.
- ⊕ **H + 90 minutes:** 10 x LCT with a full Squadron of tanks.

Thereafter, successive waves would bring more artillery, tanks and reserve specialist vehicles ashore and 21 x DUKWs or 'Ducks'¹ would begin ferrying stores and ammunition to the beaches.



Key:

LCT(R)	Landing Craft, Tank (Rocket)
LCS(M)	Landing Craft, Support (Medium)
FOO	Forward Observation Officer
LCG(L)	Landing Craft, Gun (Large) DD
Tank	Duplex Drive Tank
AVRE	Assault Vehicle Royal Engineer
LCT(A)(HE)	Landing Craft, Tank (Armoured) (High Explosive)
LCT(CB)	Landing Craft, Tank (Concrete Buster)
LCA(HR)	Landing Craft, Assault (Hedgerow)
LCA	Landing Craft, Assault
LCF	Landing Craft, Flak
ML	Motor Launch

Landing craft assault formation for a typical British Brigade Group.

For the most part, the sheer weight of fire and the strength of the assault force overwhelmed the German beach defences. Only on OMAHA beach, where the Americans found far stronger defences than anticipated and where the assaulting troops were pinned on the beaches until the afternoon, did the Germans manage to seriously disrupt the landings. In addition, Allied air superiority meant that the *Luftwaffe*² hardly put in an appearance in all day. Montgomery's call for *"the violence, speed, and power of the initial assault"* was well heeded.

On D-Day, nearly 6,000 ships supported the invasion. Allied planners had predicted the loss of 10% of the landing craft, with a further 20% damaged. In the event, the losses were less severe. However, considering the complexity of the landing plan it is not surprising that in the first 30 minutes of the operation the schedule collapsed, and successive waves reached the shore hopelessly entangled with each other, creating a great jumble of men, vehicles, landing craft and wreckage on the waterline. Despite this however, nearly 176,500 men landed on the beaches during the next few days.

¹ Amphibious truck. Name derived from *D* (Date 1942), *U* (Amphibian), *K* (All-wheel drive), and *W* (Dual rear axles).

² The German Air Force.

THE ROYAL ENGINEER CONTRIBUTION TO THE INVASION



The diverse skills of the Royal Engineers were put to the test in the invasion and subsequent breakout from Normandy. Few operations would have been possible without extensive Sapper support.

During the Preparatory Phase, Royal Engineers were key members of the Combined Operations Pilotage Parties who covertly reconnoitred the invasion beaches using Swimmer Canoeists launched from midget submarines. Meanwhile, other Sappers were hard at work preparing maps of the Normandy landing areas, assembling the constituent elements of the MULBERRY Harbour; and controlling the movement of the assembling invasion force.

But the breaching of the German coastal defences would clearly be of paramount importance to the success of the whole operation. Clearing the beaches would involve:

- ⊕ Removal of a variety of beach obstacles at the low and high-water marks.
- ⊕ Disarming and removing mines and other explosive devices from these obstacles.

Once cleared, beach exits would need to be established, which included:

- ⊕ Breaching seawalls, where one existed, and creating and maintaining ramps and firm access routes through the soft sand above the high-water line.
- ⊕ Removing knocked-out vehicles obstructing the exits.

All this would also have to be done whilst under enemy fire.

The sheer breadth of obstacles, man-made and natural, likely to be encountered during the landings led to the requirement for an equally wide range of specialist vehicles to overcome them. Pioneering the implementation effort was Major General Sir Percy Hobart, commander of the newly formed 79th Armoured Division. The resultant vehicles were widely known as 'Hobart's Funnies'.



79th Armoured Div Insignia



Maj Gen Sir P C S Hobart

For D-Day, 1st Assault Brigade Royal Engineers¹, part of 79th Armoured Division, were equipped with a number of specialist Armoured Vehicle Royal Engineers (AVREs) – essentially Churchill tanks modified to suit the needs of the Assault Engineers. Also in support were Sherman Flail tanks ('Crabs') fitted with heavy-duty rotary chain flails that 'flogged' the ground and cleared any mines in its path. The tasks of the Breaching Teams on D-Day included:

- ⊕ The breaching of minefields, barbed wire, and various other beach obstacles (using AVREs and 'Crabs').
- ⊕ The laying of flexible matting to provide firm going for tracked and wheeled vehicles (using the AVRE 'Bobbin').

¹ Consisting of 5th, 6th, and 42nd Assault Regiments.

⊕ The scaling of seawalls, crossing anti-tank ditches, and bomb craters (using fascines, Armoured Ramp Carriers ('ARK'), bridgelayers, and armoured bulldozers).

⊕ The destruction of gun emplacements and defended buildings (using AVREs, 'Crabs', and Churchill 'Crocodile' flame tanks).



Churchill Mk IV AVRE armed with a Petard spigot mortar.



The 290 mm Petard spigot mortar. It could fire a 40 lb charge (called a 'Dustbin') up to 72 m.



Sherman Mk IV Flail ('Crab'). The flail was driven by the tank's engine and would cross a minefield at about 1½ mph, clearing a path 2.7 m wide.



Churchill AVRE Mk III with No 2 Tank Bridge. It provided MLC 60(T) or MLC 40(W) crossing over a 9 m gap. Launch time was 90 seconds.



Churchill AVRE Mk III Armoured Ramp Carrier ('ARK'). It could bridge a 15 m gap, cope with 1.5 m of water, and be used in tandem.



Churchill Mk IV uses a Churchill AVRE ARK to scale a sea wall.



Churchill Mk IV AVRE carrying a fascine.



Churchill AVRE Mk IV 'Bobbin'.



Churchill AVRE Mk III with Small Box Girder (SBG) Bridge. It could cross a 9 m gap or surmount a seawall up to 3.6 m high.



Churchill Mk VII 'Crocodile' Flame Tank.



D7 Armoured Bulldozer.

Additional intimate support was provided by Duplex Drive (DD) tanks. These were Sherman tanks fitted with a flexible skirt that enabled them to float. This allowed them to effectively 'swim' ashore from their launching ships before shedding their skirts and fighting as a 'normal' tank.



Sherman DD tank (skirt in stowed position).



Sherman DD tank (skirt erected).

What Happened

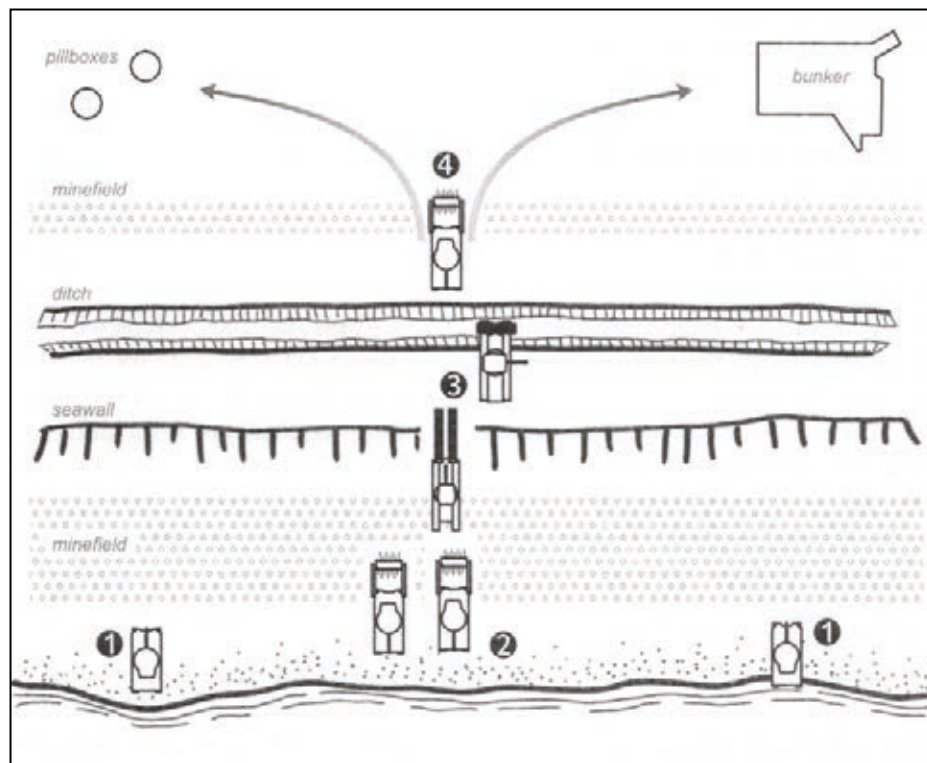
The invasion began with the airborne assault in the early hours of D-Day. Royal Engineer tasks were many and varied, necessitating a considerable dispersion of Sappers in small parties throughout the area. Priority tasks were:

- ⊕ To assist in the seizure of the bridges at Bénouville and Ranville and to remove or neutralise any demolition charges.
- ⊕ In the event that these bridges had been blown, to assist in the crossing of the Caen Canal and the River Orne. For this purpose, a detachment of Sappers with collapsible dinghies was dropped with 7 PARA.
- ⊕ To create a demolition belt on the River Dives between Troarn and Varaville. This included the destruction of five road and railway bridges.

- ⊕ To destroy the guns and equipment of the Merville Battery.
- ⊕ To clear the initial landing zones for glider-borne forces. These zones were then to be extended and cleared of glider debris ready for the second wave due later on D-Day.

With the exception of the operation at Merville, all these tasks were carried out successfully. The Bénouville and Ranville bridges were seized intact and held. The demolition belt along the River Dives was complete by 0930 hours. As soon as the primary tasks had been completed, 3 and 591 Para Sqn RE then concentrated on the mining of the approach roads to the area and the laying of anti-personnel minefields.

When the seaborne invasion started later that morning, each of the three Infantry Divisions in the first assault at GOLD, JUNO, and SWORD beaches was supported by elements of the 5th and 6th Assault Regiments Royal Engineers. Each beach was allocated two Assault Squadrons, whose primary objective was to clear lanes across the beaches and to establish up to eight beach exits suitable for tracked vehicles to get onto the inland lateral roads. This was done as follows:



Assault plan for Breaching Teams.

- ❶ Sherman DD tanks come ashore, drop their float shrouds, and begin delivering suppressing fire against German defences.
- ❷ Sherman Flail 'Crab' tanks, working in pairs, clear lanes through the initial minefields; 'Bobbin' AVREs lay pathways over soft ground.
- ❸ AVREs move forward to drop SBG bridges over any seawalls, or fascines into ditches, as infantry and other tanks advance forward.
- ❹ 'Funnies' continue inland, clearing obstacles as required.

On 6 June several beach exits were open within an hour of the first landings, allowing conventional armour to start moving inland. By 1130 hours more beach exits were open, lateral tracks were being cleared and momentum was growing steadily. Beach clearance also continued in conjunction with naval specialists in underwater explosives to allow the ships to come in closer to the shore. However,

this was not achieved without loss. In some sectors, up to 50% of the 'Crabs' and AVREs had been knocked out, with high casualties among the crews.

With a steadily growing bridgehead, the Sapper role then spread inland in support of the ground forces. Mine clearance and mine laying to secure captured positions against counterattack were particularly vital tasks. In addition, maintenance of beach exits, repair of cratered roads, and the establishment of water points all had to be completed in order to support the massive build-up of troops. Railway and Inland Waterway companies started to bring transport facilities in Normandy back into operation, whilst Royal Engineer camouflage units sought to hide work from the enemy. By 7 June, advance parties from specialist Royal Engineer units had arrived to begin the construction of temporary airstrips and to bridge the Caen Canal and the River Orne.

As the Allies initially would not have access to a port in Normandy they brought two with them. Each of the so-called MULBERRY Harbours served the British and American sectors. The first of the British elements arrived at Arromanches on D+1 and the harbour was operational by D+9. Royal Engineer Port Construction and Floating Equipment companies assembled and then operated the harbour. It was to remain open throughout the Normandy campaign even despite the disastrous storm of 19–22 June that destroyed the American harbour. The end of 1944 had brought some 39,000 vehicles and 222,000 men ashore through the MULBERRY Harbour, without which the Armies could not have been sustained.

By the end of 1944 there were nearly 87,000 Royal Engineers in France and the Low Countries. This number had increased still further by the end of the war.

COMPARISON OF ALLIED AND GERMAN TANKS USED IN NORMANDY

Churchills! Our commander ordered to initially 'scratch' only the first and last of the olive-green monsters. Open fire! The first Churchill swung around on its axis, immobilised! While the radio operator opened up with his MG on the crew bailing out, the last tank was set on fire. The two tanks in the middle swerve around each other wildly. Quickly, however, their fate was sealed: number three took two hits to the body above the tracks – no one could have gotten out of that! The last one finally knocked out by two hits to the rear. Thin white smoke rose from the hatches before the heavy armour plates were ripped off the rear with a terrible bang.

– SS-Hauptsturmführer¹ Will Fey

Tiger Tank Commander, 102nd SS Heavy Tank Battalion during the fighting for Hill 112

In the Second World War, and particularly in Normandy, it is widely accepted that the German tanks significantly outclassed the British and American ones. In the First World War the British not only produced the first tanks in action in 1916, but also continued to produce the better ones until the end of the war. The Germans produced their first tank in 1918 and only 11 of these were used in anger. In fact, the majority of tanks used by the Germans in that war were captured British ones!

Between the wars British tank design was poorly coordinated and suffered from the conflicting ideas of how tanks should be used. In general, German guns overmatched British armour protection, British guns were defeated by German frontal protection, and British tanks had a reputation for unreliability in the early years of the war. By the time of the Normandy landings the Allies fielded three types of tank, which were reliable, and either had good protection (Churchill) or, although lightly armoured, were much more agile than the German tanks (Sherman and Cromwell). However, the Allies main deficiency was tank firepower. The American and British tanks were mostly armed with a 75 mm gun. Although this had a reasonable high explosive (HE) capability it was unable to penetrate the frontal armour of the German Panther or Tiger tanks, even at the closest range. Just before D-Day the British fitted 17-pdr gun to the Sherman. This gun was excellent and had a performance similar to the German tank guns. However, only one in four British tanks had such a weapon during the Normandy battles.

The details of the tanks involved in the Normandy fighting are shown below, and in the table that follows. As a final point it should also be noted that while the German tanks were generally superior to the British and American vehicles, they were less easy to replace. As an example, in Operation GOODWOOD the British lost approximately 60% of their tank strength in the three armoured divisions (350 tanks), but four days later had brought in sufficient replacements to bring them back to full strength. The Germans were rarely able to replace knocked out tanks and their armoured force steadily declined. Quite often crews or proportions of crews were able to escape when their tank was knocked out and the problem of crew replacement was not as severe as that of vehicle replacement.

Allied Tanks

⊕ **Cromwell.** Designed as a heavy cruiser to replace earlier variants that had poor protection and firepower, it came into service in 1942. Originally armed with a 6-pdr gun, a 75 mm gun had replaced this by the time of Normandy. A 600 hp Rolls Royce engine (a down-rated version of the Spitfire fighter engine) powered it and it was extremely agile and very reliable. Some versions, called the Centaur, mounted a 95 mm howitzer; two of these were normally deployed in tank Squadron headquarters.

⊕ **Churchill.** Designed as a heavily armoured infantry tank, the Churchill entered service in 1942. Originally armed with a 2-pdr gun and extremely unreliable, it was up-gunned, and reliability improved by the time of the Normandy battles. These versions mounted the 75 mm gun, which was a 6-pdr gun reamed out to take the American 75 mm ammunition. As well as providing nearly one third of all the British gun tanks in Normandy, it also formed the basis for a number of special purpose variants including flamethrowers, bridge layers, and mine clearance tanks. The AVRE variant was particularly successful; mounting a Petard spigot mortar, it could project a HE 'dustbin' accurately out to 72 m and was widely used as a concrete demolition device.

¹ Captain in the *Waffen-SS*.



Cromwell Mk VII.



Churchill Mk VII.

⊕ **Sherman.** Entering service in 1942, it proved to be the most prolific tank of the war. Of an American design and build, it was used extensively by the American, British, and Canadian armies in the Normandy fighting. There were two noteworthy variants developed by the British and issued to the 79th Armoured Division ('Hobart's Funnies'). The first was the Duplex Drive (DD) tank, which was able to swim, kept afloat by a canvas screen, and propelled by two propellers driven by a power take-off from the main engine. Designed especially for the beach landings on D-Day, they were most successful on all but OMAHA beach. The second variant was the equally successful Flail tank ('Crab') used to clear minefields.



Sherman Mk IV.

⊕ **Sherman Firefly.** The basic Sherman tank armed with a 75 mm gun was obsolescent in the face of superior German guns and armour. Its employment in the Mediterranean revealed it to be under-gunned and under-armoured. In early 1944, the Americans started to up-armour the Sherman with appliqué armour and fitted a slightly longer gun, which brought the tank's gunnery performance almost to the level of the German Panzer IV. Unfortunately, the Panzer IV was the least effective of the German tanks in Normandy! The new Sherman tanks were only just beginning to arrive in US units in significant numbers prior to D-day. Some British regiments with experience in Italy, meanwhile, enhanced the armour of their fleet of earlier versions by fixing spare track links to the most vulnerable spots. The mounting of a 17-pdr gun in the Sherman Firefly was a true enhancement to the tank's firepower, which enabled British armour to take on the German heavies on more equal terms and at greater ranges. However, by July 1944 only one tank per troop of five tanks had been up-gunned to Firefly standard. This was only 12 tanks out of a tank Regiment's strength of 64 tanks or a total of 10% of the British and Canadian tanks ashore on the 10 July 1944!



Sherman Mk Vc Firefly.

German Tanks

⊕ *Sturmgeschütz*² (StuG) III. Originally developed as an assault gun for infantry support, the StuG evolved into a dual-purpose gun and tank-destroyer. German tank production fell short of operational requirements as the war progressed and the StuG III was often pressed into service to supplement the tanks in panzer divisions. In contrast to the Allied tank-destroyers, it provided overhead protection for the crew, together with a low silhouette. A shortcoming of the turretless design, though, was restricted traverse for the main 75 mm gun.

² Meaning 'assault gun'.



StuG III Ausf G.



Panzer IV Ausf H.

⊕ **Panzer³ IV.** This tank first entered service in 1936 and was until 1943 the principal main battle tank of the German Army. It remained in service until the end of the war and was the most numerous of the German tanks. It was progressively up-gunned and up-armoured as a result of experiences in Russia and North Africa and by the time of the Normandy was still the equal of any of the Allied tanks. Over half the German tanks deployed in Normandy were Panzer IVs. It mounted a 75 mm gun; initially in a short-barrelled form for infantry support and then a longer-barrelled version for improved tank killing. This latter version was the one used in Normandy, the most common being the Ausf H and J versions.

⊕ **Panzer V Panther.** Rushed into service in 1943 as a response to the appearance of the Russian T-34, initially it was very unreliable but after significant improvements became one of the best tanks of the war. Approximately one third of the German tanks in Normandy were Panthers; the first battalion in each Panzer regiment was meant to be equipped with them, but in fact only seven out of ten Regiments actually had received them by the time of the battles. It mounted a 75 mm long-barrelled gun with excellent penetration. It also had very good protection. It became the main battle tank for the Germans from 1943 onwards. Weighing in at 45 tons, it had a 600 hp engine and was designed to eventually replace the ageing Panzer IV.



Panzer V Panther Ausf A.

⊕ **Panzer VI Tiger I.** This tank came into service in 1942 and 1,355 were produced until production stopped in 1944. It was issued to the Heavy Tank Battalions who were attached to panzer divisions as required. Only between 50 and 60 Tigers were committed to the Normandy battles. It was an extremely heavily armoured tank and only the British 17-pdr gun could penetrate the frontal armour. It mounted the well-known 88 mm gun and could easily defeat any Allied tank.

⊕ **Panzer VI Tiger II.** This was the ultimate in German tanks during the war but only 439 were built. Often known as the 'King' or 'Royal' Tiger, it had only just started to be issued in June 1944 and only one Company in Normandy had been equipped with it by the time of the battles (12 tanks). Like the Tiger I, it was held by the Heavy Tank Battalions, but had even thicker armour. Weighing nearly 70 tons it was almost invulnerable to anti-tank fire. It mounted a longer barrelled version of the 88 mm gun and could defeat any Allied tank at 1,000 m range. The tank's weaknesses were in the engine that wore out quickly and high fuel consumption. Because only 12 tanks were used in Normandy, they did not have a significant effect on the fighting.

³ Short for *Panzer Kampfwagen* (meaning 'armoured fighting vehicle').



Panzer VI Tiger I Ausf E.



Panzer VI Tiger II.

ALLIED AND GERMAN TANKS: THE TECHNICAL DETAILS⁴

Tank	Gun ^A	Weight of Shell (lbs)	Penetration at 500 m	Penetration at 1,000 m	Protection in mm		Remarks
					Front	Side	
Churchill Mk VII	75 mm ^B	14.25	APC 68 mm APCBC 103 mm	61 mm 94 mm	152	25	British gun & US ammo.
Sherman Mk V (BR)	75 mm	14.25	APC 70 mm APCBC 103 mm	59 mm 62 mm	76	25	US gun & ammo.
Cromwell Mk VII	75 mm	14.25	APC 68 mm APCBC 103 mm	61 mm 94 mm	101	8	British gun & US ammo.
Sherman Vc Firefl	17-pdr	17	ABCBC 125 mm APDS 187 mm	118 mm 165 mm	76	25	- Sherman with 17-pdr gun. - APDS introduced Summer 1944.
Panzer IV Ausf H	75 mm (48)	15	90 mm	79 mm	50	10	In service 1943 – 45.
Panzer V Panther	75 mm (70)	15	141 mm	121 mm	110	15	
Panzer VI Tiger I	88 mm (56)	20.7	110 mm	101 mm	100	26	- In service 1942 – 44. - 50 – 60 in Normandy.
Panzer VI Tiger II	88 mm (71)	22.25	182 mm	167 mm	150	25	- In service 1944 – 45. - 485 produced.

Notes:

A. Figures in brackets relate to the barrel length as a multiple of the calibre.

B. The British 75 mm was a 6-pdr reamed out to 75 mm and with a chamber that could take the US 75 mm ammunition.

⁴ Information supplied by the Tank Museum, Bovington.

FRIDAY 27 SEPTEMBER 2024

EXTRACT FROM ROYAL ENGINEERS TOUR GUIDE
NORMANDY TO THE SEINE (pp. 21 –23)

(X)

Account of Operations by 3 Parachute Squadron D-Day to D + 4

Squadron headquarters and two troops, which should have dropped between ESCOVILLE and TOUFFREVILLE with 8 Para Bn, were actually dropped about 0050 hours East of the road LE MARIQUET-ESCOVILLE due, apparently, to misplaced navigational aids. The majority RVd at cross roads 123734 under the OC, together with some members of 8 Para Bn. Noise of firing from LE MARIQUET direction indicated that later members of the sticks had become involved with the enemy in that neighbourhood. A satisfactory quantity of explosive and demolition equipment was available from kit bag and container loads, thanks largely to the container locating device.

RE personnel and stores were adequate to make some sort of demolition at the three bridges at TROARN and BURES, and the party therefore moved off at about 0230 hours led by Maj ROSEVEARE, Capt JUCKES and those sappers not harnessed to the heavy trolleys.

At road junction 140703 contact was made at about 0400 hours with some officers of 8 Para Bn, whom Maj ROSEVEARE instructed to organise the defence of the road junction with the infantry accompanying him. A medical jeep and trailer which had joined en route was reloaded with the General WADE charges etc necessary for TROARN bridge.

Capt JUCKES and the bulk of the sappers were despatched to the bridges at BURES with their stores on trolleys, whilst the OC with Lt BREESE, and seven NCOs and sappers set out for TROARN with the jeep and trailer with a Bren and several Stens at the ready.

Just before the TROARN level crossing, the jeep ran into a barbed wire knife rest from which it took twenty minutes hard work with wire cutters to disengage.

The TROARN garrison was now thoroughly roused; so everybody climbed on the jeep and trailer, and the best speed possible with a load of 3000 lbs odd was made. The passage through the town was a running fire fight, and Spr PEACHEY did good work as rear gunner with a Bren. Full advantage was taken of the steep hill down out of the town, and the party went out with an MG 34 firing tracer over their heads.

On arrival at the bridge, thirty-nine General WADE charges were placed in a continuous line across the crown of one span and, in five minutes, a gap of between fifteen and twenty feet was made.

As TROARN was too unhealthy for the return journey, the party retired North along a track towards BURES. The vehicles were ditched when going became impossible at about 0500 hours and the party moved straight to LE MESNIL, avoiding the road junction 140703 where a good deal of fire was heard. LE MESNIL was reached about 1300 hours.

Capt JUCKES' party moved through the BOIS DE BURES and reached the two bridges unopposed at about 0630 hours. Lt SHAVE and one section tackled the farm bridge and the remaining sappers of 2 Tp, amounting to one and a half sections under Lt FORSTER, the railway bridge. In the absence of the platoon of 8 Para Bn, protection was afforded by the remaining sappers of 1 Tp. Meanwhile contact had been made by Lt WADE with elements of 8 Para Bn and two RE jeeps and trailers loaded with additional explosives which had landed on the correct DZ. An attempt by Lt WADE to take a jeep and trailer load of explosive to increase the gap at the TROARN bridge was foiled as the enemy were on the alert.

Later it was decided to make a second attempt at TROARN bridge in spite of very limited infantry protection, and a small force set out composed as follows :

One Pl 8 Para Bn
Protective det 3 Para Sqn under Sjt SHRUBSOLE
Lt WADE and six other ranks
Jeep, trailer and forty General WADE charges
Rearguard det 3 Para Sqn under Lt SHAVE

The route taken was East to BURES and then South towards TROARN. In spite of warning from local inhabitants about the strength of the German garrison, it was decided to push on into the town. The infantry drove the enemy up the street in a Westerly direction, whilst Sjt SHRUBSOLE and his party cleared the way to the bridges after a spirited engagement in which the enemy lost one killed and five prisoners of war. The rearguard was left in the orchard immediately North of the town while the working party with jeep and trailer proceeded to the bridge. An adjacent span to that already destroyed was tackled with General WADE charges which brought down the intervening pier as well, increasing the gap to between thirty-five and forty feet. Also some boats found nearby were sunk. The time was now 1500 hours and the party withdrew successfully.

Troops jumping towards the ends of sticks and landing in the RANVILLE area became embroiled with the enemy at once and there are many stories of sappers being cornered and escaping. The individual reports all show that a heavy toll of the enemy was taken by these small bands. The late Sjt JONES, for example, killed eight of his captors with their own weapons. Spr THOMAS, although shot at and wounded during his descent, killed three enemy with two 36 grenades on landing. Practically all these parties rejoined the squadron later in the day.

Capt SMITH's troop, scheduled to drop on the DZ NE of VARAVILLE with 1 Cdn Para Bn, were dropped largely in the flooded area to the East and in the village itself. One aircraft took such violent evasive action that the men were thrown flat and the stick stretched from VARAVILLE to ROBEHOMME, some 3,500 yards. Containers proved very difficult to retrieve even though the locating device showed up under between two and three feet of water.

Lt INMAN collected twelve sappers and three containers of explosives and took them with considerable difficulty across a network of ditches to VARAVILLE, where he met Lt BAILLIE who was alone. Five sappers and 200 lbs of explosive were left with Lt BAILLIE who proceeded to destroy successfully the VARAVILLE bridge.

Lt INMAN then set out for the ROBEHOMME bridge with the remainder. On his way, he met Capt SMITH, Lt HOLLOWAY and three sappers. Capt SMITH went to the VARAVILLE bridge whilst the rest proceeded to ROBEHOMME. BAVENT was held by the enemy and the party therefore took to the flooded fields carrying the explosive on their backs. They reached the bridge at 0900 hours, only to meet Sjt POOLE there and hear that he had dropped nearby and destroyed the span with a clean cut using 30 lbs of explosive collected off troops of 1 Cdn Para Bn also in the vicinity.

Lt INMAN's party then started to improve the demolition with two craters on the home abutment at about 1100 hours, but an attack by lorried infantry had to be beaten off with the Bren guns before the craters were successfully fired at about 1300 hours.

The remainder of the squadron on returning to LE MESNIL from TROARN and BURES then set about retrieving the anti-tank mines from the jettison drop in the area. 3 Para Bde staff assisted in organizing this. The containers were widely scattered in a wooded area, many in occupied territory. Some Mk V anti-tank mines began to come in at about 2200 hours, and Capt JUCKES' troop started mining the road junction 140703. Some eighty mines were laid by midnight, buried in the carriageway and verges, and the troop returned to LE MESNIL at about 0200 hours.

Squadron headquarters was established alongside HQ 3 Para Bde at about 1600 hours, but no contact was established with HQRE 6 Airborne Div until D + 1, though completion of demolitions was notified over the command wireless net. The OC made personal contact with the CRE early in the morning of D + 1 at HQRE.

During D + 1, very few more mines were retrieved from the jettison drop, but a special allotment was forthcoming from a thousand mines which HQRE had obtained from 3 Brit Div. The cross roads at 141729 were mined during the evening and night under small arms fire.

Although Capt SMITH had rejoined the squadron on D-Day from VARAVILLE, the rest of 2 Tp were still out with elements of 1 Cdn Para Bn during most of D + 1. At about 1600 hours L Sgt WREN and seven sappers blew two craters at road junction 193736 near LE HOIN, having been unable, on account of the floods, to find the culvert which they had originally been ordered to demolish. Contact was made by an infantry patrol with HQ 3 Para Bde to which the combined force made its way under cover of darkness.

At about 1600 hours on D + 1, Lt MARSH was sent out to reconnoitre the road circuits in accordance with the operation instruction, although many of these had been covered during the squadron's wanderings the day before. He was unable to cover them all as some were still in enemy hands, but he returned some four hours later having found no signs of enemy mining. Ground communication with LE MESNIL sector was still very precarious and hazardous, so the unit was left under command 3 Para Bde.

3 Para Sqn remained under command of their brigade for a few days and could not be withdrawn in view of the tactical situation. They took their place in the line as infantry at LE MESNIL. Before long, however, they were withdrawn from their infantry role and, in passing, it is interesting to note that the most important troop position was taken over by a parachute battalion. Most of the squadron had been in continual contact with the enemy at a range of a hundred yards or less for several days and were in sad need of rest.

Before the squadron returned however, one or two patrols were carried out with the infantry and in those the sappers proved themselves fully capable of deliberate movement behind the enemy lines. The most successful of this type was done by a section of RE and a platoon of infantry which succeeded in blowing two craters behind the enemy on the road leading out of BREVILLE. Before retiring they had the satisfaction of hearing an enemy half-track vehicle go into the first crater.

D Company, 2nd Battalion Oxfordshire and Buckinghamshire Light Infantry Attack Pegasus Bridge & Museum

Location: Bénouville

4. Your task is to seize intact the brs over R ORNE and canal at BENOUVILLE 098748 and RANVILLE 104726, and to hold them until relief by 7 Para Bn. If the brs are blown, you will establish personnel ferries over both water obstacles as soon as possible.

– Extract of Orders given to Major John Howard

Officer Commanding D Company, 2nd Battalion Oxfordshire and Buckinghamshire Light Infantry

We were seated, arms interlocked, facing each other in silence, lest the enemy below were alerted by our voices. Not a sound, except for the swishing of the air rushing past the open door of the Horsa glider, flying through the night at 90 mph over Normandy. Without warning, the pilot shouted, 'Christ, there's the bridge!' The glider's nose tilted sharply down and sparks, which we thought were enemy tracer, flew from the skids as they struck the ground. A series of violent bumps and the sound of splintering wood, followed by my being ejected through the side of the aircraft. Relieved to find I was still in one piece, still holding the Sten with its bayonet fixed and gratified that none of the extra grenades I was carrying had gone off.

– Lieutenant David Wood

Platoon Commander, D Company, 2nd Battalion Oxfordshire and Buckinghamshire Light Infantry
coup de main force for Pegasus Bridge

My brigade task was to seize, intact, the bridges over the River Orne and the Caen Canal at Bénouville and Ranville and establish a bridgehead... As my small aircraft skimmed over the defences of the Atlantic Wall, not a shot was fired. The red light came on and then the green. I was 'out', seconds later a bump. It was the soil of France. The time, some 20 minutes after midnight on the 5/6 June 1944. The darkness was complete; the silence unbroken except for the sound on my disappearing aircraft ... A few minutes later the sky to the west lit up – firing, explosions, all the sights and sounds of battle. It was John Howard's assault. Now I must get to the bridges as quickly as possible and be able, if need be, to adjust the Brigade plan. Would the bridges be in the hands of friend or foe? Intact or damaged? Indeed, Howard's Company had achieved a splendid success. The bridges were in our hands. All was well!

– Brigadier Nigel Poett, Commander 5th Parachute Brigade
dropped with the Pathfinders east of the River Orne

What Happened

The assault on the bridges at Bénouville and Ranville was carried out by 181 soldiers: four platoons of D Company and two of B Company 2nd Battalion Oxfordshire and Buckinghamshire Light Infantry (2 OX & BUCKS), in six Horsa gliders, led by Major John Howard. His orders were to capture the bridges intact and to hold them until relieved.

At 0016 hours on 6 June 1944, three of the gliders landed near the village of Bénouville on the west



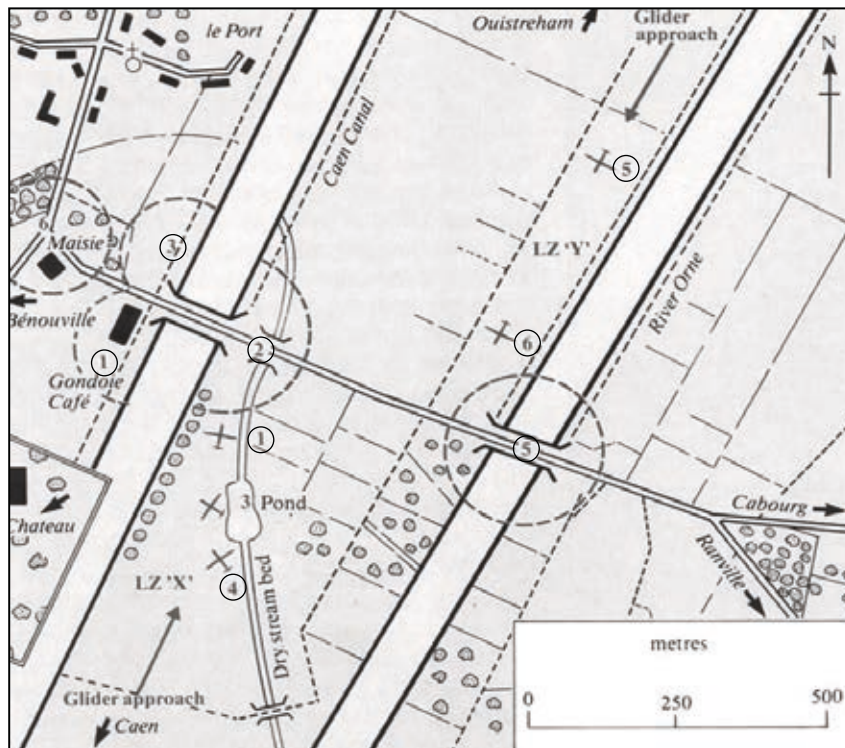
Looking past the wrecked gliders to Pegasus Bridge (arrowed).

bank of the Caen Canal within 50 m of the canal bridge (later called Pegasus Bridge). The first, containing Major Howard and 1 Platoon of the *coup de main* force, landed heavily and came to an abrupt halt when, as had been planned during the briefings, it pushed its nose through and penetrated the first belt of barbed wire around the bridge. The force of this sudden halt catapulted both glider pilots through the cockpit screen and rendered them, together with all of their passengers, unconscious. Within a few seconds, however, the men had fully regained their senses and became aware

that all around them was quiet. The noise of the crash had not alerted the Germans at the bridge. If

it had, then the fate of the *coup de main* might have been decided in seconds. Fortunately, the guards had disregarded the noise that they heard as that of debris falling from a damaged Allied bomber.

1 Platoon was quickly out of the glider and instinctively went about the tasks for which they had been training for months. Several men knocked out a machine-gun position whilst the majority of the platoon, led by Lieutenant Den Brotheridge, rushed over the bridge to capture the other side, firing from the hip and lobbing grenades as they charged. Once across to the western side of the bridge, Brotheridge dropped a grenade into another machine-gun position but was shot through the neck as he did so. Mortally wounded, he was the first British soldier to die as a result of enemy action on D-Day. As 1 Platoon had begun their attack, 2 Platoon under Lieutenant David Wood landed safely in the second glider and immediately moved up to help clear the enemy away from the eastern end of the bridge. Lieutenant Sandy Smith's 3 Platoon were not so lucky as the abrupt halt to their landing had torn the fuselage from the glider and left a dozen men trapped in the wreckage and one drowned in the adjacent pond. Smith was injured as a result of the crash and was hurt further by the grenade-wielding German whom he encountered and killed several minutes later. However, he continued to lead his men and helped to secure the western side of the bridge. Throughout all of these actions, the accompanying Royal Engineers of 249th Field Company had been ignoring the enemy fire directed at them as they climbed all over the bridge, looking for wires to cut and detonation devices to remove. The Germans had clearly prepared the bridge for demolition but, fearing an accidental explosion or sabotage by the French Resistance, the charges had not been placed. After overcoming the initial shock of this sudden and violent assault, the German garrison fought back, but defeat was inevitable, and many fled the scene. As the firing died down, Major Howard knew that, for now at least, the bridge was safely in British hands.



The glider landings around the bridges over the Caen Canal and River Orne.

Key:

- 1 – Maj Howard's glider + 1 Platoon.
- 2 – Main enemy positions.
- 3 – Lt Smith's glider + 3 Platoon + RMO.
- 4 – Lt Wood's glider + 2 Platoon + REs.
- 5 – Lt Sweeney's glider + 5 Platoon.
- 6 – Lt Fox's glider + 6 Platoon.

A few hundred metres to the east, spanning the River Orne, is the Ranville Bridge (now known as Horsa Bridge). This was the second objective of 2 OX & BUCKS and was assaulted by the remaining three gliders, one of which landed miles away from the bridge and so played no part in the raid. The other two gliders, however, landed on target. Lieutenant Fox's 6 Platoon landed first and proceeded to attack the bridge, but by this time the sound of fighting in the direction of Pegasus Bridge had alerted the German garrison. Fortunately, their defensive capability amounted to a single machine-gun position, the crew of which fired a few ineffective rounds and then fled in the face of 6 Platoon's accurate mortar fire. A few minutes later, 5 Platoon under Lieutenant 'Todd' Sweeney, who landed 640m short of the landing zone, arrived at the bridge, unaware it had already been taken. They ran

across it, expecting to be fired upon at any moment, but in the gloom before them there appeared the unmistakable shape of 6 Platoon commander. So ended the brief struggle for Horsa Bridge.

The *coup de main* raid had been a complete success. Both bridges had been taken in just 10 minutes; total casualties were 2 killed and 14 wounded. The landing of the gliders onto these very small landing zones in the dark, using only compasses and stopwatches for navigation, was later hailed by Air Vice Marshal Trafford Leigh-Mallory, the commander of Allied air forces during the invasion, as 'one of the most outstanding flying achievements of the war'.

Most of 6 AB Div landed by parachute at 0045 hours, one of their many tasks being to reinforce the defenders of the bridges, which were successfully held against enemy interference by Howard's men for two hours before the first troops arrived. The role of the 7th Battalion The Parachute Regiment (7 PARA) is frequently overlooked in this regard, for they were the relieving force who were to bear the brunt of the German counterattacks to the west of the Caen Canal throughout 6 June. They had dropped some 600 strong, however due to a confused and scattered drop, less than half of these had assembled at the rendezvous point and all of their support weaponry, mortars and medium machine guns, were missing. Nevertheless, the Battalion distinguished itself in holding a wide bridgehead around Pegasus Bridge against constant enemy attacks. In particular, their A Company, based in the nearby village of Bénouville, suffered the most severe fighting. Just before daylight, three German armoured vehicles rounded the corner by the town hall and headed slowly towards the bridge. The Company's PIAT¹ destroyed the first vehicle, which burst into flames and caused the others to withdraw. This was the start of a running fight with German forces, which at one stage saw the Company cut off from the remainder of the Battalion.



Projector, Infantry, Anti-Tank (PIAT)

The first relief was from No. 6 Commando, led by Lord Lovat who commanded 1st Special Service Brigade, who arrived at 1700 hours to the sound of bagpipes played by Private Bill 'The Mad Piper' Millin. The arrival of these troops, however, did little to help the defence of the bridges as their orders were to cross over and help secure terrain east of the Caen Canal, which the remainder of the 6 AB Div was currently holding. The remnants of A Company 7 PARA continued to hold out until the 2nd Battalion The Royal Warwickshire Regiment arrived from the invasion beaches and secured Bénouville, thus allowing the evacuation of the many wounded. The remaining 20 men of A Company who were still able to fight followed at around midnight.



Pegasus Bridge, with Howard's gliders in the field beyond.

¹ A shoulder-launched weapon that fired a 2½ lb hollow-charge projectile. It weighed 32 lbs and had an effective range of 110 m.

CHAPTER SIX

BRIDGING OVER THE CAEN CANAL AND RIVER ORNE NORTH OF CAEN

Reference Maps: 1 : 50,000 FRANCE Sheets 7F/1 and 7F/2 Map XI

(I)

I CORPS BRIDGING OPERATIONS JUN AND JUL 44

Outline of Events

It was planned before D-Day that I Corps should be prepared to construct by D + 4, in the whole Corps area, seven class 40 bridges totalling 920 feet in length and one class 9 bridge totalling 130 feet in length.

'It is fortunate', says 1 Corps Engineer Report, 'that we were not called upon to redeem our promises, as the landing of both bridge platoons and bridging sets differed widely from the programme.'

Actually the total demolitions carried out by the enemy on 1 Corps front consisted of one culvert behind MIKE sector and one lock bridge at OUISTREHAM. The culvert was replaced by an improvised causeway consisting of one AVRE, assorted timber beach obstacles, rubble from a nearby house and beach gravel.

The story of the capture of OUISTREHAM lock gates by 79 Aslt Sqn has been told in CHAPTER FIVE. The locks were rebridged on D + 8 when 18 GHQ Tps Engrs built two 80-foot double single Bailey bridges to form part of a 1 Corps tactical route.

Planning for 3 Brit Div sector allowed for the following rafting and bridging equipment to be landed on D-Day:

- (a) Equipment for one infantry company to provide a bridgehead for rafting in the area BENOUVILLE 0974.

Rafts for anti tank guns and carriers to support 6 Airborne Div and attached troops East of R ORNE.

Rafts for maintenance vehicles for 6 Airborne Div and attached troops.

Equipment for one infantry battalion in area CAEN.

Class 9 rafts for infantry battalion vehicles.

- (b) Two class 40 bridges over CAEN Canal and R ORNE respectively required to be completed on D + 3.

To meet these anticipated commitments, 3 Brit Div was allotted 1621 and 1623 Bailey Pls, 1624 Pontoon Pl, 1626 FBE Pl and 1629 Aslt Pl, all from 106 Br Coy RASC. As it would not be possible to land all the Bailey equipment required for the two class 40 bridges on wheels, since enough craft were not available to do so, the balance was to be landed in LBVs on QUEEN beaches on the second tide of D-Day and RASC bridging lorries were to be refilled.

In the event, dislocation of plans arose from the late landing of bridging equipment but, after some vicissitudes, including a number of casualties from shelling and mortaring, two class 40 bridges were constructed and opened to traffic by 1230 hours on D + 5 at BENOUVILLE 097743 and RANVILLE 104744 respectively. These bridges were built by 17, 71 and 263 Fd Coys and were named LONDON I and LONDON II respectively.

Subsequently the approaches were metalled by 1 C Tps Engr and stood up to continuous tracked and wheeled traffic.

On D + 7, Commander 1 Corps decided that a second class 40 route should be opened at once across the CAEN Canal and R ORNE. The time factor made it essential to reduce to a minimum the work to be done on the approaches, and the shortage of pontoon equipment precluded the construction of more than one floating bridge.

It was decided to build two 80-foot double single Bailey bridges across the locks at OUISTREHAM, using the existing towpath until a better exit could be constructed, and a 336-foot class 40 Bailey pontoon bridge across the R ORNE near ECARDE 1175. This involved accepting a maximum gradient in the landing bay of 1 in 10. A special tidal type of pontoon bridge was out of the question as the parts were not available.

The lock bridges were built by 18 GHQ Tps Engrs on D + 8; and the floating bridge by 71 Fd Coy (7 A Tps) and 234 Fd Coy (1 C Tps) in twenty-five hours. The floating bridge was subsequently named YORK II.

Shortly afterwards, the two 80 foot bridges over the lock gates were dismantled, and replaced by a 357-foot class 40 Bailey pontoon bridge over the canal 111765, which was named YORK I. This was completed, including 300 yards of metalled approaches, by 19 and 234 Fd Coys (1 C Tps) in sixteen hours.

On 15 Jul it was found necessary to provide two additional class 40 crossings over CAEN Canal and R ORNE

to enable 8 Corps (7 Armd Div, 11 Armd Div and Gds Armd Div) to undertake the operation of breaking out from the South of the bridgehead East of R ORNE.

For this purpose, the bridges (named TOWER I) over the locks at OUISTREHAM were rebuilt, and a new Bailey pontoon bridge (named TOWER II) was constructed a hundred yards downstream of YORK II at ECARDE; a Bailey bridge was built over the canal near the existing swing bridge at BLAINVILLE 0873, and a Bailey pontoon bridge at LONGUEVAL 0871 over R ORNE. These were named TAY I and TAY II respectively. The existing civilian bridge at RANVILLE (known as EUSTON II) was strengthened to class 40. This gave a total of five class 40 crossings.

To assist in these tasks 8 GHQ Tps Engr (80,90 and 91 Fd Coys) were placed under command 1 Corps.

Details of these bridges are shown on Map XI (p. 29 of this pack).

Accounts of bridging operations carried out by RE 3 Brit Div, 71 Fd Coy and 106 Br Coy RASC are at sections (ii) (iii) and (iv) respectively of this chapter. As the aim is to show the part played by each, much information is repeated in more than one section (only Section ii is included in this extract).

Protective Booms

Each floating bridge was provided with a boom to prevent damage by floating mines.

At first a small type of boom had been used, but after a floating improvised mine had detonated against the inside of the boom on the R ORNE bridge at RANVILLE, having presumably been swept under by the fast flowing tide, it was decided to erect a boom which would prevent completely any floating object striking the pontoons.

Later a German Naval Officer was seen swimming downstream from COLOMBELLES presumably with the intention of destroying or reconnoitring the boom. He was captured and no damage was done.

Maintenance

It was found necessary to employ one platoon for the maintenance of every two bridges and approximately 400 yards of approach routes.

In spite of strenuous efforts by the enemy to destroy all the bridges both by air attack and shellfire, little damage was in fact caused. Initially, one troop of 40 mm AA guns was deployed around the bridges at BENOUVILLE and RANVILLE; this was increased to four troops of 40 mm and one troop 20 mm AA guns on D + 4. Subsequently one regiment of 40 mm AA guns and one troop of 20 mm AA guns were deployed to cover the crossings over the R ORNE and the CAEN Canal. Up to 31 Jul, these guns had shot down approximately twenty-five enemy aircraft, fifty per cent of which were destroyed within the first four days.

Approximately thirty-seven pontoons were either damaged or destroyed as a result of shellfire and bomb splinters, but were quickly and easily replaced by the spares available on the site.

Some damage was caused to bridges by the passage of our own vehicles. One thirty-foot single. single Bailey and one fifty-foot single single Bailey collapsed after tanks had collided with the bridges and damaged panels so that the bridge buckled. Both these accidents occurred during darkness. One Bailey bridge connecting post failed on a Bailey pontoon bridge which had to be closed for repairs. It was considered that this item was of faulty construction and no other similar failures occurred. Wearing surfaces of 9 x 1½ inch timber were laid on all bridges. It was found that after continuous use by heavytracked and wheeled traffic, these surfaces required renewing every twenty four hours. All bridges required periodic washing down and scrubbing to remove mud and dirt particularly in wet weather.

The amount of spares held at each site was twenty five per cent for floating and ten per cent for fixed equipment. These were found adequate and no variations were necessary.

Lessons Learned

The following lessons were learned in these operations:

(a) Approaches

It was again clearly emphasised that these are the most sensitive parts of the bridge, and it was necessary to devote very careful attention to their construction. It was found that during dry weather both wheeled and tracked vehicles could use the same approach provided that it was a really solid metalled route. In wet weather, it was found better to use two separate approaches, one for wheels and the other for tracks.

(b) Damage to bridges

It appeared that a better form of lighting bridges at night must be introduced, especially during the passage of bulldozers and wide tanks such as CHURCHILLS, to prevent collisions with the bridges. It would seem that a line of lights along the centre line of the decking should be provided to assist drivers. It is also essential for the endposts of bridges to be more adequately marked to prevent collisions when approaching the bridge.

(c) Surface of the bridge

It was found that counter flooring is essential to preserve Bailey decking. It can be maintained under traffic without difficulty. Diagonal counter flooring is helpful in deadening the noise of traffic using the bridge.

(d) Capacity of bridges

It was found that Bailey bridges were easily capable of taking up to three hundred and fifty vehicles per hour during daylight, and up to a hundred and eighty per hour during darkness.

ACCOUNT OF OPERATIONS BY RE 3 BRIT DIV IN BRIDGING CAEN CANAL AND RORNE

By a *coup de main* at H - 5 hours, 6 Airborne Div succeeded in capturing the existing bridges at BENOUVILLE and RANVILLE intact before demolition could be achieved.

Full plans had been made for the early establishment of ferries as a standby in the vicinity of the bridges, and shore loading FBE rafts working between PSP ramps were to be constructed for this purpose. Certain advance loads of grillage material were also landed on the first tide for early work on construction of the class 40 Bailey pontoon tidal bridges, which were still required as soon as possible as relief bridges.

All rafting and bridging operations were the responsibility of OC 17 Fd Coy, who had under command 71 Fd Coy and the necessary detachments of 15 Fd Pk Coy and 106 Br Coy RASC. 263 Fd Coy also came under command for this task on completion of their work on air landing strips.

The leading reconnaissance officer of 17 Fd Coy together with the officer in charge of construction arrived at the site at 1300 hours after experiencing considerable sniping en route. Here they found that the bridge site was under light shell fire and movement on the banks drew fire from snipers in the village and in the Chateau de BENOUVILLE area.

Then began a series of casualties which went far towards upsetting the carefully prepared and rehearsed plans for the establishment of the crossings. By 2130 hours, 17 Fd Coy had lost, through severe wounds, their OC and both of their reconnaissance officers, one of whom had been detailed for control of the marshalling area and one for the control of bridging material from the forward assembly area. CRE 3 Brit Div, whilst reconnoitring a return route for empty bridge vehicles on night of D-Day to D + 1, ran over a Tellermine in his halftrack but escaped with minor injuries and shock. The second in command of 17 Fd Coy and the second field engineer of HQRE, both of whom were key men in the supply of bridging equipment, were killed on D + 1. OC 15 Fd Pk Coy who was much concerned with the refilling programme was landed twenty four hours late, and 9 Stores Sec of 18 GHQ Tps Engrs, who were detailed for supervision of the discharge and refilling of these stores, arrived forty-eight hours late.

Command of the units concerned in the work of the crossings devolved on OC 71 Fd Coy.

The major dislocation of plans arose from the late landing of the bridging equipment. The advanced loads of rafting material and grillage for the Bailey bridges landed on the first tide, came ashore and moved inland much according to plan, though their access to the site was delayed by several hours. The first of the sixty-five vehicles due to be landed on second tide in the evening of D-Day, however, arrived at the site sixteen hours late. The average delay for the sixty five vehicles landing on the second tide and the thirty-two vehicles landing on the third tide was twenty-seven hours.

Little more than half of the bulk bridging equipment carried in LBV was available for unloading at 1730 hours on D + 1, eighteen hours behind schedule, and the balance was not landed by D + 5, when the ORNE bridge was completed to class 30. The two piers on the ORNE bridge moreover had to be reduced by one tripartite pontoon and the quantity of spare equipment at the sites was insignificant. At this time there was not one spare centre section pontoon.

Progress on the rafts and bridges was naturally much delayed. A stand-by class 9 raft and ferry gear were erected by 17 Fd Coy on the canal by dawn D + 1 as was the grillage for the relief Bailey bridge over this obstacle. The stand-by ferry on the river was not ready until 1400 hours on D + 1.

For the remainder of D + 1, unloading of the meagre flow of equipment continued subject to periodic alarms which called the RE units off their primary tasks to man defences or provide patrols, a type of disturbance which was to interfere several times with the bridge construction work during the following days.

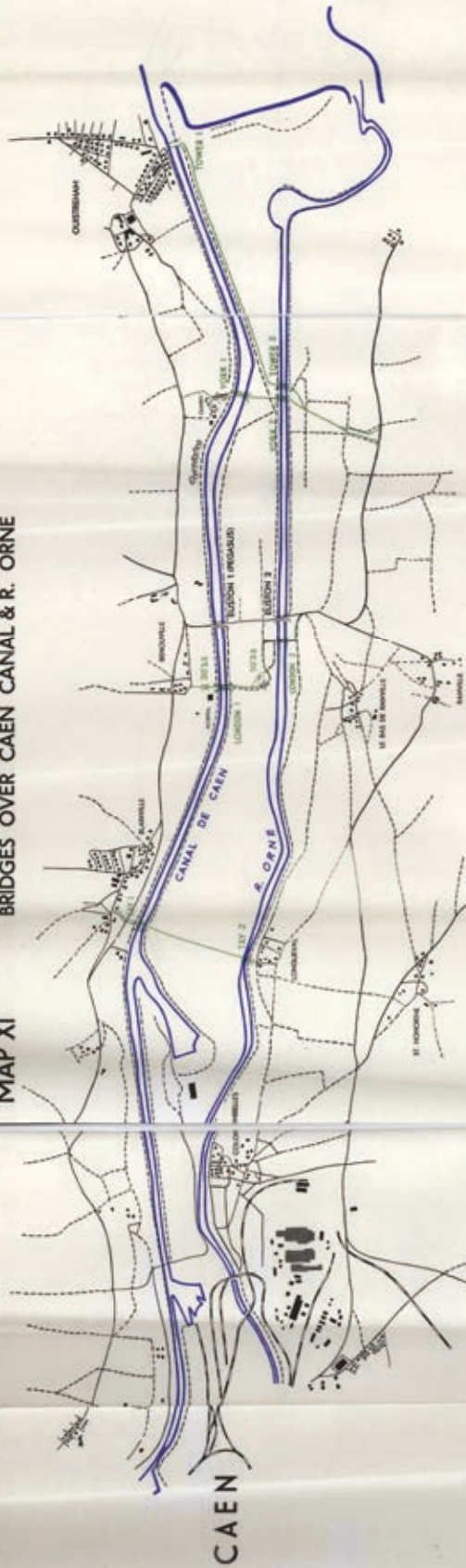
A class 40 raft was erected during the night D + 1 to D + 2 on the river by 246 Fd Coy, since the strength of the existing bridge was in considerable doubt and insufficient equipment had arrived to complete a bridge.

By 0100 hours D + 3, a class 40 tidal Bailey bridge of span 220 feet was completed over the canal on a new site approximately six hundred yards South of the existing bridge. The six pier raft and home grillages were built by 17 Fd Coy and 71 Fd Coy, and a landing bay by each 71 Fd Coy and 263 Fd Coy, the latter accomplishing the construction also of the far bank grillages. The bridge was named LONDON I.

On D + 3, delivery of equipment permitted construction to begin of a class 40 tidal Bailey of span 280 feet across R ORNE approximately 400 feet upstream of existing bridge. One six pier raft and far landing bay was completed by 263 Fd Coy by 1600 hours. One six-pier raft under construction by 17 Fd Coy was shelled and a total of nine pontoons were holed by shrapnel, but the second raft was finally completed at 0800 hours D + 4. The second landing bay built by 71 Fd Coy was ready for launching by mid-day D + 4 but, by this time, the low tide was missed and launching of the home landing bay was postponed seven hours. Considerable difficulty was encountered in launching the centre span girders by night in a fast current, and the bridge and approaches were not completely open to traffic until 1230 hours D + 5. The bridge was named LONDON II.

Work on the approaches, which included a class 40 track duplicating the route from BENOUVILLE to RANVILLE, involved the construction of a thirty-foot single single and a fifty foot single single Bailey bridge and four culverting tasks. This work was carried out by sub units of 17 and 246 Fd Coy

MAP XI
BRIDGES OVER CAEN CANAL & R. ORNE



CONSTRUCTION	TAY 2 006721	TAY 1 019728	LONDON 2 104146	LONDON 1 008143	YORK 1 101766	YORK 2 103762	TOWER 2 115763	TOWER 1 110768
ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE	ON A SPECIAL TYPE BRIDGE
BRIDGE 81	BRIDGE 81	BRIDGE 81	BRIDGE 81	BRIDGE 81	BRIDGE 81	BRIDGE 81	BRIDGE 81	BRIDGE 81
TIME TAKEN (WEEKS APPROXIMATE)	10 WEEKS	10 WEEKS	10 WEEKS	10 WEEKS	10 WEEKS	10 WEEKS	10 WEEKS	10 WEEKS



Lifeline to 6 Airborne Division showing bridges YORK I across the CAEN Canal and TOWER II and YORK II across R ORNE



**YORK 1 class 40 Bailey pontoon bridge over CAEN Canal
(view looking West)**



YORK 1 class bridge with boom in foreground



YORK 1 class bridge with boom in foreground



YORK 1 class bridge with boom in foreground

9TH BATTALION THE PARACHUTE REGIMENT ATTACK – MERVILLE BATTERY & MUSEUM

Location: Merville

I eventually arrived at the entrance to Number One casemate to find a melee of my own soldiers and those of the opposition, a number of who were standing, very frightened, with their arms raised. All around lay dead or dying soldiers.

– Major Allen Parry

Officer Commanding A Company, 9th Battalion The Parachute Regiment

The Plan



Whilst planning for D-Day great care was taken to identify those elements of the Atlantic Wall that could threaten the invasion force as it came ashore. The concrete emplacements of the Merville Battery were thought to house four 150mm guns capable of bombarding SWORD beach on which the British 3rd Division was due to land. It was therefore deemed vital that the guns be silenced before the sea-borne forces arrived. Prior to D-Day the RAF had bombed the area several times, but with little effect. Therefore, the capture of the Merville Battery became one of the tasks of 3rd Parachute Brigade (3 Para Bde) and was given to the 9th Battalion The Parachute Regiment (9 PARA) under Lieutenant Colonel Terrence Otway.

Lt Col T B H Otway

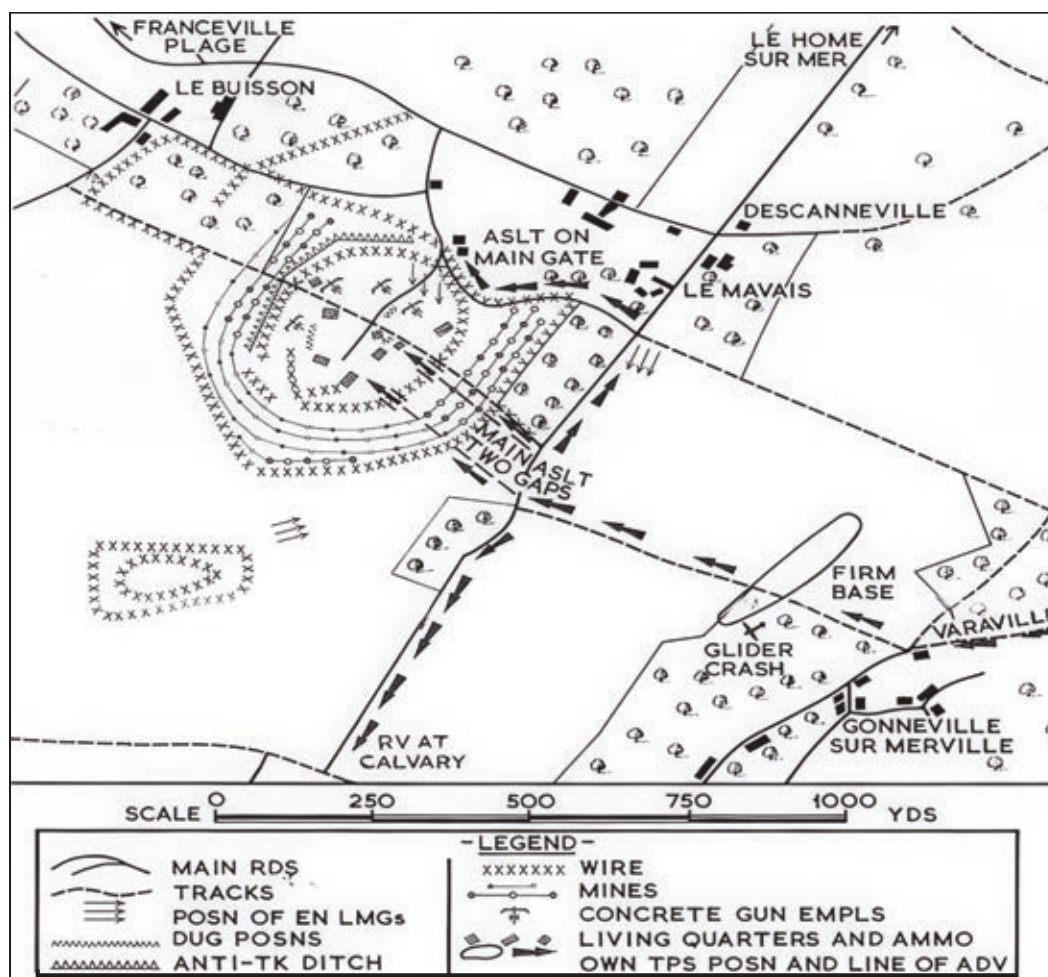
The 130 Germans of the 716th Infantry Regiment who manned the battery not only had concrete to protect them from aerial attack but any assault on the ground had to penetrate a minefield between two barbed wire fences. On the northwest of the position, which was lozenge-shaped and some 700 m by 450 m, was a partially completed anti-tank ditch. Within the barbed wire compound were a number of machine-gun positions. To the planners it had the appearance of a fortress and they planned to attack it as if it was.

The plan was complex. The Battalion was to drop into a DZ two miles away near Varaville to the southeast of the battery. It would then divide into two groups. The first, smaller group, was to prepare a rendezvous for the arrival of the main body and also reconnoitre the battery. An attack by a hundred RAF Lancaster bombers was scheduled for 0030 hours and Otway wanted to know the resulting damage before launching his assault. The first group was to jump at 0200 hours and the main body at 0050 hours. The main body comprised most of the Battalion, including A, B and C Companies. B Company was given the job of breaching the first wire barrier and clearing a path through the minefield. C Company was the frontal assault force, while the remainder of A Company was to hold a firm base from which the others could begin the assault. C Company was to rush the gap in the minefield and split into four parties accompanied by Sappers of 591st Parachute Squadron Royal Engineers (591 Para Sqn RE). Each party was to capture and blow up a casemate. The plan did not end there. Timed to arrive as C Company made its charge through the battery defences, three Horsa gliders were to crash-land inside the perimeter. This party, the coup-de-main, consisted mainly of A Company personnel and a number of Sappers. Then, if all else had failed, HMS Arethusa was standing by to pound the battery with her 6-inch guns at 0500 hours.

What Happened

The first small group took off from RAF Harwell at 2310 hours on 5 June and dropped accurately and on time at 0020 hours, despite the fact that their aircraft had an uneasy reputation for losing its tail in mid-air! The officer in charge of the rendezvous to which the reconnaissance group and then the main body were to report was Major Allen Parry and on landing he used his 'Ducks, Bakelite' (a whistle device that made a sound like a duck) to locate a friendly face. There was no one about, so he set off alone to the rendezvous.

En route he heard the explosions from the Lancaster raid on the battery. It was well off target. Reaching the rendezvous, Parry set up his Aldis lamp to guide in the paratroopers and waited for the main body. When they came the aeroplanes seemed to be spread out and as their engine noise faded away he began to flash his Aldis signal. But two hours after the drop only 150 men, including Lieutenant Colonel Otway, had arrived. It was less than 25% of those that had set out. There were no Sappers and, apart from personal weapons, they only had one Vickers machine-gun and twenty Bangalore torpedoes



The assault on Merville Battery

between them. Otway decided to make for his objective and at 0250 hours set out, reaching an area 450 m from the battery at about 0420 hours. Parry, originally in charge of the rendezvous, was given command of the assault party and divided his allocation of 50 men into four units as per the original plan. Now they would wait for the coup-de-main party. When that arrived into the middle of the battery, as per the plan, they would attack.

Things went wrong again. One of the three gliders broke its tow rope just after take-off, the second landed several miles east of the battery and the last one, although it actually flew over the battery, crashed in an orchard about 100 m away to the southwest having been hit by anti-aircraft fire. The troops on board did, however, distract the attention of some German machine-gunners who had been causing casualties from their position outside the perimeter as well as intercepting a German patrol that was moving up to reinforce the battery. Otway decided to get on with the job. Without engineer support or any mine-clearing equipment it was a case of charging both the wire and the minefield. The paratroopers went forward firing their Sten guns from the hip, using the gaps in the wire and minefield caused by the bombing and blowing two more gaps using the Bangalore torpedoes. At the main gate, a small party opened fire hoping to cause a diversion. The Germans fought well, coming out of their bunkers to counterattack. It was a short and bloody scrap in which Allen Parry was wounded. The cost to the Battalion was heavy – 70 officers and men killed or wounded. The Battalion was down to 80. The German garrison was reduced to 22 prisoners, all the rest were killed or wounded. When the fighting had stopped Sergeant Eric Bedford turned to one of his soldiers and said, "Blimey, Sid, here take a look around. This is the 9th Battalion, mate. Looks more like the 9th Platoon to me!" Bedford also laid claim to a 'first' – the first German flag captured in the invasion that he found in Casemate 1. He stuffed it down his smock for later.

591 ANTRIM AIRBORNE SQUADRON, ROYAL ENGINEERS

The History of 591 Antrim Airborne Squadron, Royal Engineers, 6th Airborne Division by Major Jack, 1945

Roll of Honour [Normandy only list compiled by DB]

Rank and Name	KIA	CWGC Site
Lt G Wharton	17/06/44	Ranville CWGC 2A.G.11
Lt L Shand	24/07/44	Ranville CWGC 4A.C.15
Lt P R H McCririck	21/08/44	Ranville CWGC 4A.C.14
Cpl J Reardon-Parker	06/06/44	Ranville CWGC 5A.D.2
Cpl W Kelly	06/06/44	Ranville CWGC 3A.F.2
L/Cpl K W Branston	06/06/44	Ranville CWGC 4A.D.20
L/Cpl T A Fraser	06/06/44	Ranville CWGC 3A.D.2
L/Cpl F T Whale	09/06/44	Ranville CWGC 1A.A.17
Spr G Thompson	06/06/44	CWGC Site not found
Spr D Wheeler	06/06/44	Ranville CWGC 3A.E.2
Spr F Wolfe	06/06/44	Ranville CWGC 3A.C.2
Spr J Youell	06/06/44	Ranville CWGC Collective Grave 5A.D3-8
Spr J Evans	06/06/44	Ranville CWGC Collective Grave 5A.D3-8
Spr A Austin	06/06/44	Bayeux CWGC 28.H.21
Spr L J Hart	09/06/44	Ranville CWGC 1A.A.21
Spr P Coyle	11/06/44	Bayeux CWGC Memorial Panel 12 Column 1
Spr G Kerry	09/06/44	Ranville CWGC 1A.E.14
Dvr A Handley	06/06/44	Bayeux CWGC Memorial Panel 12 Column 1
Dvr G I Palin	10/06/44	Ranville CWGC 1A.E.22

The Following Were Made Prisoners of War and Have Since Returned to the United Kingdom:

Major P A WOOD	Sapper C M BARTLETT	Sapper K H FISHER
Captain A F JACKSON	Sapper C T LAW	Sapper T C CARTER
Lieutenant K H BEST	Sapper P SUTCLIFFE	Sapper A W ROSS
Lieutenant A B OLIVEIRA	Sapper Y BLYTH	Sapper J READ
Lance Serjt S FORREST	Sapper J BOWMAN	Driver H BARRETT
Corporal R W TORRINS	Sapper O C D MITCHELL	
Lance Corporal P S HITCHCOCK	Sapper J F VEITCH	

The Following Were Wounded in Action:

Foreword

Lieutenant D H THOMAS	Corporal [?] STONER	Sapper D JEWELL
Lieutenant J R FISH	Corporal F H SANIERS	Sapper J OWENS
Lieutenant A C LITTLE	Corporal J E JACKSON	Sapper A DRUMMOND
Lieutenant P G L MITCHLEY	Lance Corp J H BOWDEN	Sapper P MURRAY
Lieutenant R M MERRILL	Lance Corp F SHERIDAN	Sapper D READ
Lieutenant P A COX	Sapper [?] OSGOOD	Sapper J KENDALL
SSM H K PEDEN	Sapper R G FARLEY	Driver [?] HODGSON
Serjeant F W B LENNON	Sapper [?] WITHEY	Driver W M BELAMERE
Lance Serjt W MILLS	Sapper W T AUSTIN	Driver H DUNN
Lance Serjt H ADAMS	Sapper T GREEN	Driver R GODDARD
Lance Serjt P C CONDIE	Sapper J HILL	Driver A OLDFIELD
Lance Serjt G O FOSTER	Sapper A HOLT	Private J T BARLOW
Lance Serjt A FRASER	Sapper A E GRANT	Private S NORRIS
Corporal W HAYNES	Sapper W HOBSON	

It is hoped at some time in the near future to publish, for private circulation, a history of the Engineers of the 1st Airborne Division and that this will be followed by a similar history of the 6th Division. For these I was approached to provide a history of 591 Airborne Squadron.

Since the full Squadron history is not likely to feature in either publication and since to produce 60 copies of typescript is, almost, as easy to produce as one I am circulating this book (if such it can be called) to as many as possible of the former members of the Squadron.

That most of these had left for Palestine, for Malaya, or for 'civvy street' by the time this story came to be written has made it impossible to gather all the material I would have liked. Not only details of operations but the personal stories of hardship and heroism, or humour and rascality that lurk in the memories of officers and men and which, however poorly strung together, must make a most human and moving history - and perhaps even a scandalous one! This is but the framework on which those who helped to make the history can rebuild their own experiences as a paragraph here and there stirs the memory.

I have been greatly helped by Captain HINSHELWOOD, Lance Serjeant TAYLOR and the few remaining members of the Squadron, particularly with the earlier history. There must be many grave omissions and even more inaccuracies, but in spite of these I hope that for those who have served in the Squadron the story may have some interest. Certainly, the writing of it has brought home to me vividly the privilege that has been mine in Commanding the Squadron for the past fourteen months.

Allan Jack
Bulford, 20 December 1945

The Origin of '591'

At the outbreak of war in September 1939, '591', then known as the Antrim Fortress Company RE, was stationed in a fort on the shores of Belfast Lough, County Down. Raised some two years previously as a territorial unit, they had been converted into a Searchlight Company RE and were to spend the first twelve months of the War as part of the anti-aircraft defences of BELFAST.

In October 1940 the first laborious steps were taken to reform the unit as a Field Company and about 30 men under Captain BURES moved to PORTAFERRY, south of BELFAST. It was intended that the remainder of the unit left behind at the fortress should be relieved by Gunners of low medical category at an early date and should follow on. Unfortunately, this plan fell through and, although augmented on Christmas Day by 100 recruits of the original Irish Territorials only thirty crossed with the unit to England the following month.

The Non-Fighting Forties

At HALIFAX a further fifty recruits joined the unit and Major WHITE took over command. After intensive individual and unit training at 22 training-centre, followed by a month at WALLINGFORD bridging camp, the unit moved to LUTON as a Corps Field Company RE in 2nd Corps.

In the summer of that year the unit came under command of 76th (Norfolk) Division near NORWICH, to be followed by a six-month spell under 11 Corps before finally settling down in 54th Division, stationed at WOODBRIDGE in Suffolk. During this period, they were employed for the most part on the building of defence works and camp in common with most other Engineer units in Britain.

On 3rd October 1942 Major P.A. WOOD took over command of the unit at WOODBRIDGE. By now, works were giving place to serious training. With the Division the unit took part in ambitious exercises and a considerable part of the winter was spent in bridging and in realistic training in demolitions and mines.

The spring of 1943 found the unit still at WOODBRIDGE, by now a highly trained, fit and happy entity. Under the leadership of Major WOOD and the encouragement of being at last firmly established as an operational unit, a fine unit spirit prevailed and, though the number '591' casually allotted during foundation at HALIFAX had meant little then, it was now 'something' to belong to 591 (Antrim) Field Company RE

About this time the 6th Airborne Division was born, and during the spring and early summer vigorous training was carried out for the Division throughout the country.

Conversion to Airborne

It was in May that an 'Airborne Circus' arrived with 54th Division to impress on the Divisional Engineers the glories and excitement of going to battle by air. It was no surprise to learn very shortly after that all the Companies were to be converted to Airborne. Of the three field companies of 54th Division, 249 Field Company was to be transferred in its entirety to form an Airborne field company and 286 to form the Airborne Field Park, while parachute volunteers were to be called for from 591 to form a second parachute squadron RE in 6th Division. The response was great, for the thought of being dropped from the unit was even more appalling than the thought of being dropped from a plane, but amongst many of the older men it was found that although the spirit was willing the flesh was weak and after an exacting medical examination many were rejected.

Of the now 591 Parachute Squadron thus formed, a little under half were from the original unit. The rest was made up of men who had volunteered from 249 and 286 companies and of fresh intake. Immediately, Major WOOD started a most intensive fitness campaign. PT and hardening were the order of the day, all day, and when, on June 2nd, 1943, the Squadron moved to the Airborne Training School near CHESTERFIELD, there was no one for whom the rigorous 'pre-parachute' training held any terrors. As training ended on each day, admittedly, there were many who had to crawl on their hands and their knees to their bed, but the late evening it was possible to count practically the whole Squadron in the [... ?], the 'STATION' or dancing at the notorious Chesterfield [... ?].

On 15th June the Squadron moved to RINGWAY. As against the normal run of parachute volunteers who pass through the training schools as individuals, the officers and men of 591 were extraordinarily fortunate in being able to go through all stages as a unit. In the 'sticks' into which they were divided for the parachute training, all the men knew each other well and there is little doubt that the inflection 'if old so-and-so can do it so can I' helped many to 'screw their courage to the sticking point' when the moment came for that first terrifying leap from the balloon cage. Of the whole unit only two men failed to complete the course, and the only accident was a comparatively slight one. The Squadron's 'pocket parachutist', 5' 3" Sapper VEITCH, decided during one of the later jumps that the orthodox parachute descent was too dull, hurtled to earth inextricably mixed up with a container he had met as he left the aircraft. Though badly shaken, he survived to jump again.

Some weeks later, Lieutenant OLIVEIRA, newly posted to the unit, had an even more harrowing experience while doing his first two jumps from the Ringway balloon. His parachute failed to open, and he was left hanging helplessly by the static line 15 feet from the balloon cage and 685 feet from the earth. After a hurried conference between the instructors on the ground, it

was decided to lower the balloon. Any second the helpless figure might break loose and crash to certain death. Not till Lieutenant OLIVEIRA was very near the ground did the sickening tension relax for a moment and when he finally touched down a gasp of relief ran around the field. Himself 6 feet 4 in height, he of course touched down a trifle sooner than most people in a similar predicament. Within half an hour he was doing another jump.

The course completed, the Squadron, now fully trained parachutists, went on a well-earned 14 days leave before settling down in BULFORD, firstly to reorganization and re-equipped as a Parachute Squadron, and then to the serious task of training for the operation that almost certainly lay ahead. Whether in sapper training, fieldcraft, battle drill, the use of arms or physical fitness only the very highest standards were accepted, and troop and squadron exercises of every conceivable nature were held to ensure that every officer and man knew his job as a sapper and as an airborne soldier. Later, the Squadron took part in Brigade and Divisional exercises of the most testing and exacting nature. The underlying principle of all training throughout the Division was that every man must be the master of his job and of his weapons, that he must be resolute in thought and action and that even though weary, cold, hungry and divorced from all leadership or support, he must be able to carry on. As the Divisional Commander said in one of his inimitable and colourful talks after an exercise, 'If you see a German crawling up to your position at night, don't come and tell me about it, get down on your knees and thank God for sending him! - Then wait till you see the whites of his eyes ...'. The more general engineer training was not entirely forgotten during this period and time was found for a fortnight's 'wet' bridging at WYKE REGIS in March 1944.

D-Day Rehearsals

By the end of the month, however, it became clear that training was being directed along definite lines and that the day of invasion was approaching fast. Among the first in the Squadron to become aware of this was Captain HINSHELWOOD who, with a small party working under the strictest secrecy and against time, barricaded a small house hidden away in the lanes to the north of Amesbury that was to become the centre of Divisional planning for the D day operation. Here, a growing number of officers pored over the maps and large-scale models of the Normandy coast and it was not long before the O.C. had been admitted to the secret list and briefed in the tasks the Squadron was to perform.

One of the most important tasks in the Divisional plan was the destruction of a formidable battery near the village of MERVILLE which overlooked a considerable stretch of the beaches and hinterland over which the left flank of the British invasion force was to assault. The 9th Parachute Battalion was entrusted with this vital task with, in support, 2 Troop of 591 Squadron under command of Captain JACKSON. The battery was thought to consist of four 150 mm guns established in two concrete emplacements, twelve feet high and five feet deep, the thickness of the concrete walls being 6 feet 6 inches and the roof above them covered with 13 foot of earth. All doors giving access to the position were of steel and the main armament was defended by 120 mm dual purpose guns and several machine guns. The position was surrounded by a cattle fence which enclosed a minefield 100 yards in depth. This was bordered on its inner side by a barbed wire fence 15 feet thick and five feet high, the fence in many places being doubled. At the seaward side of the battery was an anti-tank ditch 15 feet wide and 10 feet deep. To complete the defences additional minefields had been laid across all the open approaches to the battery and machine guns had been sighted to cover them. Finally, it was estimated that the position was held by between 180 and 200 men.

The Battalion were to land by parachute and assault across country while three gliders manned by picked men from the Battalion and sappers were to crash land on the battery itself. For the glider party were chosen six sappers while the remainder of the Troop were to drop with the main body of the 9th Battalion.

Rehearsals for this operation were incredibly thorough and, the Battalion Commander having chosen an area where the conditions were very similar to those foreseen in Normandy. 2 Troop moved early in May to a village near NEWBURY and there constructed an exact replica of the MERVILLE battery. Mechanical excavations and bulldozers were rushed to the spot from all over England and working all day and by the light of headlamps throughout the night, the job was completed in a week. Tubular scaffolding, hessian, and camouflage netting were used to simulate the battery position built exactly to scale from many aerial photographs, while miles of wire were used to build the outer defences. Even the anti-tank ditch was not forgotten. The work complete, the Battalion immediately began realistic rehearsals, and again and again the assault was run through on the ground until every man knew the plan and his own part in it by heart.

To the remaining troops of the Squadron was to fall the task of clearing the landing zone east of the CAEN Canal of poles and other obstructions, to provide safe landing strips for the gliders scheduled to follow those on the heels of the parachute troops on the early morning of D day. Aerial photographs showed clearly that poles had been erected closely over the whole landing zone, and indeed over all open ground along the coast. Although at first it seemed as though this would impose a very large risk of disaster on the glider borne troops, it was eventually decided that sufficient of them could be blown or cut down by sappers dropping in the first wave.

Although the task was more straightforward than that allotted to 2 Troop, preparations were no less thorough. Countless trees were cut down by the sappers in the New Forest, carted to BULFORD and erected on the moorland to the north of the camp. Simple but fool proof drills were rehearsed repeatedly until, like the sappers of 2 Troop, 'word perfect'. For the destruction of the poles, explosive 'sausages' were designed, consisting of 5 lb of plastic stuffed into a bicycle tyre inner tube which could be easily carried and quickly wrapped round the base of a pole. Each man was to fly in with two of these 'sausages' hung around his neck while others were carried in kitbags by five men in each plane and in containers. In addition, each man was to carry firing accessories and sharpened shovels for attacking the poles. To further ensure the success of the task, a party of five sappers, including Lieutenant MITCHLEY and Sergeant McCULLOCH, were to land with a party of the 22nd Independent Parachute Company ahead of the main airborne invasion force to mark the line of trees bordering the landing zone and to act as guides to the rest of the sappers.

By the middle of May all training had been completed and everything that human ingenuity and forethought could devise for the success of the operation had been done, from the final checking of wireless sets and mine detectors to the issue of gum to chew during the flight over. On 25 May the Squadron moved to a transit camp near the Airfields at FAIRFORD and BROADWELL. Briefing completed, the planes loaded, and the final checks were made of equipment. There was little to do except sit quietly back and to wait for The Day. Everyone was in the most tremendous spirits, buoyed up by the thought that they would be amongst the very first in the great invasion, and too preoccupied with their own particular tasks to worry unduly about the dangers attending them.

'Whatever Happens the Party is On'

On 4 June the word flashed round 'Tonight's the Night', but an hour before the first troops moved off for the airfields, it was learnt that bad weather had forced a postponement for 24 hours. At noon the following day, however, the news was that whatever happened, the party was 'on' that night. The weather was still such as would have meant the immediate [end] of any normal airborne exercise, but this was not a normal exercise and General EISENHOWER could wait no longer. In the late evening the troops moved over to the airfield, chutes were fitted, the

final inevitable hot tea went the rounds and, while the O.C. went around wishing each sapper 'good luck', the hundreds of planes marshalled around the darkened airfield broke into a growing roar as one after another 'warmed up'. The planes began taxiing slowly to the runway and at 1045 the first one took off and the invasion was on.

In Advance of the Van

The flight, on the whole, was uneventful until the coast of France was reached. Here a barrage of anti-aircraft fire met the Airborne Armada, considerably upsetting much of the navigation. Since the dropping and landing zones were only between one- and two-minutes flight from the coastline the upset was a serious matter. Even more serious was the strength of the wind and many of the first waves of troops were scattered widely over areas very far from the correct dropping zones.

Of the two parties of 2 Troop who jumped with the 9th Battalion, one plane load under the command of Captain JACKSON were dropped many miles from the objective at BOURGAINVILLE. Too scattered to offer effective resistance to the strong enemy forces in that area, they were one by one rounded up and taken prisoner, not, however, without putting up a brave fight for it with their limited arms and ammunition. Sapper READ was wounded, losing an arm, and Sapper HANDLEY was killed in lone gallant fights against hopeless odds. Lieutenant BEST, joining up with a party of infantry, formed a guerrilla band who roamed about for 14 days behind the enemy lines, causing considerable alarm and despondency among the Huns before finally being taken prisoner within half a mile of the British lines.

The other plane load under the command of Lieutenant HINSHELWOOD were dropped in the swampy ground in the valley of the DIVES between VARAVILLE and ROBEHOMME. They were widely scattered and, after much tribulation, joined up with an element of 'C' Company of the Canadian Parachute Battalion. With them, they helped in the defence of VARAVILLE, where there was much spirited fighting, and 17 German prisoners were taken. The next day they withdrew in a hectic forced march to the forward positions of 3rd Parachute Brigade at LE MESNIL.

Of the gliders which were to land on top of the battery position, one broke loose shortly after taking off and got no nearer to the objective than BASINGSTOKE to the great chagrin of Lance Sergeant MILLS and the other occupants. Of the other two, both got into difficulties crossing the coast but, although repeatedly hit, they were finally crash landed, the one half a mile from the battery, the other in an orchard just outside the perimeter where the occupants, including Corporal SAUNDERS, put up a magnificent fight for four hours against a platoon of German reinforcements hurrying to reinforce the hard-pressed garrison of the battery.

The task of the sappers had been primarily that of destroying the guns once captured and secondly of lending all possible engineer assistance to the assaulting battalion. The Bangalore torpedo parties were to be provided entirely from the infantry. In the end the Battalion had to carry out the assault with no sapper assistance whatsoever and with their own strength decimated by casualties and the haphazard dropping of the parachutists. The defences were no less formidable than had been foreseen but the objective was secured in the face of tremendous odds, the garrison eliminated, and the guns destroyed.

Meanwhile, 1 and 3 Troops, dropping further to the west on the D.Z. north of RANVILLE, had fared little better. Although none of the plane loads actually landed on the D.Z., all were within a reasonable distance. As they leapt from the planes, still lurching and tossing in evasion of the coastline flak, they were met by a hail of small arms fire from every corner, it seemed, of the ground to which they were all too slowly floating. On the ground, however, in the shelter of woods and orchards they were able to gather together in reasonable order and make their way

to the R.V. at a small copse south of the D.Z. This took considerably longer than had been hoped and by 0100 hours only twelve men under Lieutenant JAMES and Lance Sergeant FOSTER had collected there. Although FOSTER had dislocated his shoulder in landing, he and Lieutenant JAMES immediately organized the party and started on the clearing of the poles on the D.Z.

As the first piece of luck it was found that most of the poles were flimsier than had been expected and blowing them could be abandoned since they could be pulled down by hand. The plan was to clear four strips running parallel to each other, two for the Horsa gliders and two for the Hamilcars. Working frantically but methodically they had by 0215 hrs cleared the two Horsa strips, during which time they were joined in the work by the majority of the rest of the sappers under Captain SEMPLE who then took command of the party. Apart from the initial phase, enemy opposition was slight since the rest of the Brigade were soon keeping the enemy fully occupied around RANVILLE and the RANVILLE bridges.

At 0300 hrs when the first of the HAMILCAR started to circle overhead their strips had been practically completed. As it happened, it mattered little for, like the Horsas, very few came in to land along the strips at all, but swooped in from every point of the compass, swerving past each other like a swarm of startled bats to crash through the remaining poles and plough their way through the ground. Dawn revealed a scrap heap stretching as far as the eye could see, but the casualties, either to men or equipment, were surprisingly light.

The Squadron Takes Stock

By 0500 hours the Squadron, having completed the clearing task, moved into the BAS DE RANVILLE to dig themselves in to defend the position. A party remained to salvage containers from the DZ, for which task a pony and trap was commandeered from the local French. The strength of the Squadron at the time was disheartening to say the least of it. Nothing was known of the fate of 2 Troop, the O.C. and the whole of his plane were missing, as were the second in command, Captain DAVIDSON, and several of the men from 1 and 3 Troop who had been dropped wide of the DZ. Lieutenant THOMAS had been shot in the shoulder on the DZ and several sappers had been injured when they landed.

Later that day, Captain DAVIDSON and two sappers arrived in the Squadron area. Dropped near the village of AMFREVILLE, they had been cornered in a ditch by a section of Germans as they were trying with two infantrymen to establish their bearings. One of the infantrymen was killed by a grenade almost immediately and another badly wounded. Completely surrounded, they held out for almost an hour before the serious condition of the wounded man caused them to surrender. For three harrowing hours they were forced to lie with a heap of wounded in the centre of the village square while a fierce fight raged around them between the Germans and the attacking Commandos. When the Commandos finally won the day, they were set free.

Unfortunately, however, there was to be no sign of Major WOOD and his plane load. Forced by flak and the weather many miles from the dropping zone, their plane was hit by shellfire shortly after crossing the coast. Losing height rapidly, the pilot flashed the red light and the first of the stick bailed out. Of these, Major WOOD, Sapper LAW, Sapper BARTLETT and Lieutenant OLIVEIRA, whose chutes had barely opened as they hit the ground, were later taken prisoner. Fire was raging through the plane as the next man jumped to his death, his parachute pack ablaze on his back, while behind men struggled frantically to free themselves from burning necklaces of explosive they carried as the plane dived and hurtled to earth. Four men managed to extricate themselves from the wreckage, including Lieutenant SHINNER, who, finding himself hanging upside down by his harness, cut himself free with his fighting knife. From the blazing wreckage came the screams of the other nine sappers trapped and wounded. As Lieutenant SHINNER, with one arm shattered, struggled to help them, the Germans now swarming towards

the wreckage, sprayed it again and again with machine gun fire until one by one the screams died out as the sappers died a ghastly death.

During the afternoon of D day, 1 and 3 Troop completed their briefed tasks by laying an anti-personnel minefield in the forward defences of RANVILLE. Late that night during the checking of these fields two more sappers were wounded by shellfire.

The Germans Counterattack

Meanwhile, fierce fighting developed in the area to the south of RANVILLE as, in the late afternoon, the enemy launched the expected counterattack, supported by tanks, armoured vehicles and self-propelled guns; an attack preceded by heavy mortaring and shelling of the whole RANVILLE area. The attack was beaten off by the 12th and 13th Parachute Battalions who had been fighting magnificently since 0100 hours, although neither was able to muster more than half its strength from the widely scattered drop. That evening, exactly to the planned minute, the gliders bearing the 1st Battalion of the Royal Ulster Rifles flew in to land in textbook fashion on the landing zone, now adequately cleared of obstructions, and to occupy LONGUEVAL.

In spite of the desperately weakened strength of the Division during the first few hours of D day, the general picture as darkness fell was a heartening one. The bridges across the River ORNE and CAEN Canal had been seized and held, the battery at MERVILLE had been silenced, the demolition belt along the line of the River DIVES as part of the defence of the Divisions left flank had been most successfully completed and the villages to the south completing the Division's perimeter were firmly held.

The following day the enemy launched another counterattack and the 13th Battalion, in particular, were desperately engaged in the village of HEROUVILLE. For a time the position was critical, and the Germans succeeded in forcing their way into RANVILLE, but they were driven back, and the position was once more restored. On the left of the small perimeter now held by the Division east of the ORNE, the 5th Parachute Brigade, supported by Commandos, were also involved in bitter fighting. The Germans had succeeded in holding in strength the village of BREVILLE, and it was from here, in conjunction with a further attack towards RANVILLE from the south, that they launched on 11 June their all-out offensive to reach the banks of the ORNE. A captured operation order revealed later that their object was 'to liquidate all British forces east of the ORNE'. The 'British forces', however, refused to be liquidated. German forces once again reached the outskirts of RANVILLE and their tanks and infantry even debouched from BREVILLE on to the landing zone, a mile from the ORNE, but again they were driven back, never again to attempt seriously to dislodge the Division from its bridgehead.

During this hectic period, the Squadron, reinforced by the remnants of 2 Troop from VARAVILLE, remained in the fringe of the fighting at RANVILLE. Shelling of the Squadron area was heavy throughout and on the 9 June Sapper KERRY, Sapper WHALE and Sapper HART were killed, and three other sappers wounded within an hour. The following day Sapper PALIN was killed, and Lieutenant FISH and three sappers were wounded, again from shellfire. After another spell of shelling a little later, while checking up on casualties, an NCO noticed that the slit trench of Sapper WILEY had been blown in by a shell landing nearby. All that could be seen of Sapper WILEY was the soles of his boots pointing out from the debris. Deciding that he had most certainly 'had it', the NCO went on to attend to other casualties. Sometime later he was amazed to see Sapper WILEY unscathed and unshaken going about his work. Though buried alive, he had managed to dig his way out. About this time, too, the Squadron lost their sergeant major when 'Beef' PEDEN was evacuated back across the river with shell shock.

Among the many tasks that fell to the Squadron the main one was the laying of minefields as part of the defence of the RANVILLE area. In salvaging containers from a German minefield, another sapper was killed by an 'S' mine and in 2 Troop Sapper HOBSON and Sapper GRANT were wounded while laying anti-personnel mines in a German minefield at SALENELLES. On the 17 June the Squadron were to lose two more badly needed officers when Lieutenant WHARTON was killed, and Lieutenant LITTLE seriously injured while trying to salvage equipment from a German minefield near OUISTREHAM.

Other tasks included the fortification of Divisional Headquarters, a large house at RANVILLE which early became the main target of the German gunners and the digging in of tanks to defend the village. A few days later Divisional Headquarters moved to a line of quarries further north, about a mile from the River ORNE, where, with millions of sandbags, the Divisional sappers constructed formidable shelters against the cliff faces to shelter the sorely tried 'brains' of the Division.

During the following weeks the bridgehead was reinforced from across the ORNE and the Divisional front closed in to hold the left flank from the coast, through BREVILLE and LE MESNIL to just north of TROARN. This line was held though at the cost of many casualties, until the order for a general advance on 17 August. Most of the casualties were from sniping and from shelling and mortaring which was heaviest in the area of LE MESNIL.

On 21 June, 3 Troop moved up to this area in support of 5th Parachute Brigade and, before they had time to get organized or to dig in, found themselves in the thick of a mortar 'stonk'. Shortly afterwards, Private NORRIS, the Troop cook, was to distinguish himself. He set up his cookhouse in one of the buildings of a pottery which, just as the meal he had prepared was ready to serve, received a direct hit from a shell. The building collapsed, but after a few minutes NORRIS emerged from the debris unscathed. Telling Captain BEAUMONT that he was afraid the lunch had been spoilt, he immediately set about improvising another and was soon serving food to an appreciative troop.

Three nights later, during another period of heavy shelling, a private staggered into the Troop position badly shocked and injured in the thigh, shouting that he was being followed by a German sniper. Although mortars were still bursting all around, Sapper FARRELL left his trench and went out in search of the sniper. Though unsuccessful, he did much to restore the spirits of the Troop on his return by going the round of trenches with hot tea though mortars were still falling and the only sane place to be was below ground.

These and other incidents were typical of the spirit in which the sappers of 3 Troop, and later of 1 Troop, reacted to a period of acute discomfort and constant danger in the forward area. There, work was chiefly the building of shellproof 'Command Posts' for the Brigade, a more or less standard pattern for which was finally evolved a framework of stout round timber supporting two to three feet of earth and stone covering an excavation four feet deep and about ten feet by six in size, the whole being thoroughly bolstered with sandbagging. Other tasks of the troops while in this area were the laying of small anti-personnel minefields and trip flares around the forward defences, and, occasionally, the disposal of bombs.

There were some casualties and 1 Troop were unfortunate in losing Captain HARBORD early on when he was wounded in the chest by a shell splinter. Two days later Lance Sergeant FOSTER was also evacuated after being shot by a sniper while making a reconnaissance for a machine gun post to deal with the sniper in question.

A Swimming Feat

A few weeks before the Division started their great advance to the Seine, a bedraggled unshaven parachutist arrived at Divisional Headquarters, announced that he had just swum from FRANCEVILLE to OUISTREHAM and asked to be directed to 591 Parachute Squadron. It was Driver JACKLIN, one of the ten who had jumped with Major WOOD from the ill-fated Headquarters plane on D day. Failing to join up with any of the others, he lived for a month in the country around FRANCEVILLE, sheltered from time to time by French peasants, and making repeated attempts by night to make his way back through the German positions. He had no success for they were thickly held, and every yard of ground was covered. Finally, he decided to make his way to the coast and swim to the British held beaches across the mouth of the ORNE. To reach the sea he had to work his way through a deep minefield, a task it took him three nights to accomplish, making his progress on the 'one-man land' at the end of each night to lay up nearby during daylight. Reaching the sea, he was fortunate in finding that the current was not against him but even so, swimming strongly, it took him five hours to cover the 2½ miles to OUISTREHAM beach. The garrison of OUISTREHAM, their minds full of rumours of German 'swimming saboteurs' would not be convinced by his story and he was sent under escort to the Airborne area.

1ST BATTALION THE ROYAL ULSTER RIFLES IN NORMANDY

The 1st Battalion The Royal Ulster Rifles, initially known as the 83rd Regiment of Foot, was formed in Dublin in 1793. The 1st Battalion of this Regiment was initially employed on colonial postings in Jamaica and South Africa, but with the Napoleonic threat of that era, a 2nd Battalion was raised and saw extensive service during the Peninsular War, against the French in Portugal and Spain, from 1809 to 1814. Thereafter, the 83rd Regiment of Foot was employed in a series of home and colonial postings, their next great test coming with the Indian Mutiny in 1857. In 1881, the Regiment was renamed the 1st Battalion The Royal Irish Rifles, becoming the Royal Ulster Rifles in 1921 after the division of the country.

The Second World War

The 1st Royal Ulster Rifles had been stationed in India at the outbreak of hostilities but returned in time to help defend Dunkirk and evacuate the British Expeditionary Force. The Battalion soon became a part of the 31st Independent Infantry Brigade and was billeted in Wales, where they assumed a coastal defence role. Over the coming months the Brigade was moved to various locations in the East Anglia, London, and Kent areas, before returning to Wales in February 1941 for a more long-term posting in the Black Mountains. It was here, until the end of the year, that the Brigade trained extensively in mountain warfare, travelling light and fast with pack-transport; hundreds of horses and mules. Such specialist activities had considerable repercussions for the future of the Brigade.

At this stage in the war, the British Airborne Forces consisted of just the 1st Parachute Brigade, however in September 1941, the War Office decided that a Brigade of glider infantry should be raised to compliment them. The 31st Infantry Brigade was selected for this task and accordingly, on the 10th October of that year, it was renamed the 1st Airlanding Brigade. In addition to the 1st Royal Ulster Rifles, this experimental formation consisted of a further three battalions; the 1st Border, 2nd Oxford and Buckinghamshire Light Infantry, and 2nd South Staffordshires. Gliders were seen as a necessary method of supporting airborne operations, as they were able to carry additional infantry to reinforce the parachute brigades, and also heavy equipment, such as Jeeps and anti-tank guns. It was this factor, and the subsequent formation of the 1st Airborne Division, which made it possible for the role of the British Airborne Forces to advance beyond the small-scale and infrequent commando raids that had been previously envisaged.

Nevertheless, twenty months of training passed before the Brigade was earmarked for an action. The 1st Parachute Brigade had been detached since late 1942 and had been involved in heavy fighting in North Africa, and with hostilities in that continent at an end, the 1st Airlanding Brigade was called to join them in May 1943 to prepare for an invasion of Sicily. The 1st Royal Ulster Rifles and 2nd Oxfordshire and Buckinghamshire Light Infantry, however, did not accompany the Brigade, but were instead detached to form the experienced nucleus of the 6th Airlanding Brigade. As a part of the newly raised 6th Airborne Division, their task was now to prepare themselves for the invasion of France.

Normandy

It had originally been planned that the 6th Airlanding Brigade would land with the first wave of Airborne troops to secure the Ranville and Bénouville Bridges, however the discovery of considerable anti-glider defences on their intended Landing Zone resulted in their arrival being delayed until the evening of D-Day. When the 1st Royal Ulster Rifles landed at LZ-N, near Ranville, they were greeted by German mortaring and a degree of small-arms fire. These, however, did very little to hinder the forming up of the Battalion and only one casualty was sustained.

Because it was unclear as to what the situation would be in Normandy when the Second Lift arrived, the Ulstermen did not receive definite orders of their objectives until an hour after landing. Their task was to help enlarge the southern sector of the bridgehead by capturing the villages of Longueval and Sainte Honorine. The first of these was taken without incident, however the attempt to move on the second was dogged by communications difficulties and determined German resistance. The Battalion was forced to retire to Longueval, having suffered in excess of one hundred casualties, the overwhelming majority of which were either wounded or missing. The Ulstermen remained in this area for the following week and endured a great deal of shelling and numerous harassing attacks throughout, although no truly serious attempt was made to dislodge them. On the 13th June, with the 51st (Highland) Division arriving



6th Airlanding Bde LZ North of Ranville

to assume responsibility for the southern flank, the Brigade was moved northwards and the 1st Royal Ulster Rifles were ordered to relieve the beleaguered 12th Parachute Battalion in Bréville, in anticipation of a violent counterattack which, in the event, did not come.

Until mid-August, the 6th Airborne Division was concerned only with a static defence and a vigorous programme of patrols and sniping to prevent their opponents to the east from becoming settled. This routine ended on the 17th August when the Division began to follow up the German withdrawal in their area. The 6th Airlanding Brigade, with the Princess Irene and 1st Belgian Brigades under command, took the northern coastal route while the main force focused on securing a crossing over the River Dives further south. The 1st Royal Ulster Rifles led the advance on Cabourg, but in the face of difficult terrain and strong resistance were unable to make any headway. After several days of unprofitable struggle here, the 6th Airlanding Brigade was ordered to follow the Division along the southern route, and then proceed along the roads in between the Division's main thrust and the 1st Belgian Brigade's advance on the coastal road.

The Battalion was faced with a struggle similar to that of Cabourg whilst trying to gain a foothold over the River Touques. The Ulsters made several attempts to cross near Deauville, but enemy interference denied them passage. The 2nd Oxford & Bucks Light Infantry, however, had succeeded further to the south, and on the 24th August the Battalion followed their lead. On the following day, news was received that the coastal town of Berville-sur-Mer, at the mouth of the River Risle, had been abandoned by the enemy, and the 1st Royal Ulster Rifles and Belgian Brigade raced each other to take it; the Ulstermen won. With the 6th Airborne Division's role in the advance now at an end, the Battalion came to a rest at La Judee. In early September, the Division returned to England to prepare themselves for future operations.



Moving off the LZ, members of the 1st Bn RUR in jeep trailer being driven by Glider Pilot Regiment



HORSA Glider with bren gun sentry to the front

ACTIONS ON THE BEACHES – 77 ASSAULT SQUADRON ROYAL ENGINEERS

The 3rd Division was given the task of clearing four zones on the Normandy beaches. To do this a detachment of 5 Assault Regiment RE (ARRE), commanded by the CRE, Lt Col ABDB Cocks, from 79th Division was attached to them for the landing operations. The detachment from 5 ARRE consisted of 77 and 79 Assault Squadrons with 629 Field Squadron and 263 Field Company assisting. In addition, a detachment of eight armoured angled bulldozers of 860th Mechanical Equipment Company and detachments of flails from 22nd Dragoons completed the engineer teams. Sherman DDs were in support.

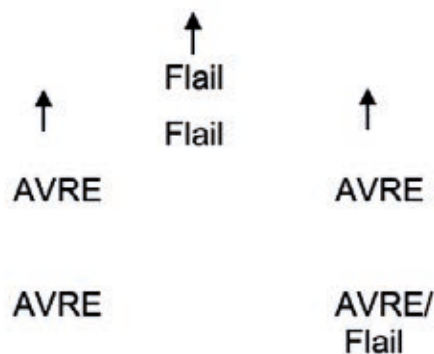
The 1st and 3rd troops of A Squadron 22 Dragoons with AVREs of 77 Assault Engineer Squadron were to provide breaching teams landed on the White Beach sector of West Queens on SWORD Beach.¹ The area of operations for the Squadron during the assault was Lion-Sur-Mer. The Officer Commanding 77 Assault Engineer Squadron on D-Day was Major K du B Ferguson DSO. The tasks given to the Squadron in priority order were as follows:²

- (a) Exits. Min 9 ft, widened to 16 ft. 2nd and High-Water lateral.
- (b) 1 Troop. Clear through minefield on road to MEXICO, and make exit to large fields on right for use of 13/18H.
- (c) Continual clearance, marking, improvement until relieved by 84 Field Company.
- (d) Assist 84 Field Company to develop both lateral and second lateral inland close behind beach.
- (e) Troop rally. Collect porpoises and armoured sledges. Refill.
- (f) Regimental rally south of MEXICO about 365188 (bogus).

From right to left the order of battle was:

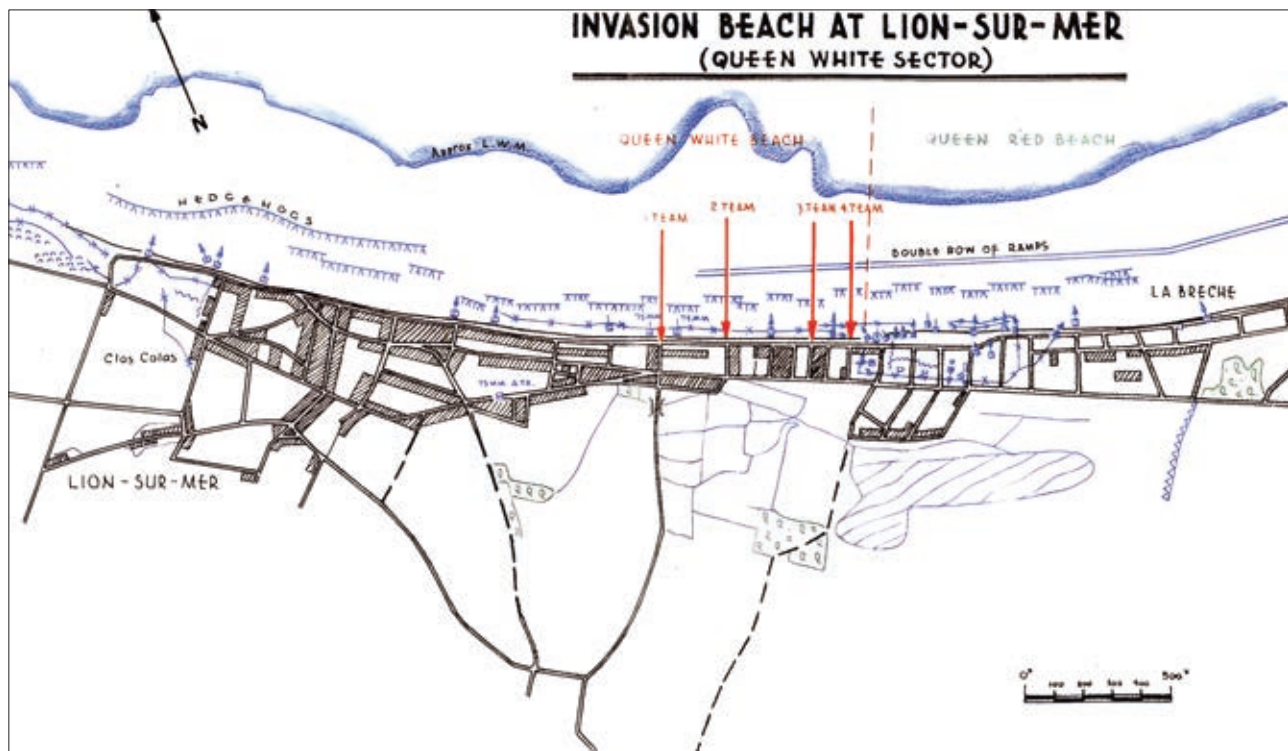
Exit	4	3		2	1	RM	Total
LCT	109	110	110A	111	112	532 – 535	
AVRE	4	3	2	4	3		16
FLAIL	2	3	2	2	3	1	13
Armd Buldozer			2			2	4
Personel	35	34	26	35	34	9	173

In each lane the two flails would lead in echelon with the remaining AVREs and Flails two forward and two rear, ie:



¹ Queen sector guarded the entrance to the heavily fortified Caen canal under observation from the long-range guns of Le Harve to the east. See Baxter, Captain G H L, 'Brief for Gen Sir George Cooper GCB MC Chief Royal Engineer on his visit to the granting of Les Clef de la Ville to the Corps of Royal Engineers Lion-Sur-Mer 10 Jun 89', (30 May 1989).

² Extracted from 'Operation Notes', based on 5 ARRE Briefing 00 No 1. These written notes were effectively the operation order for 77 Assault Squadron's D-Day activities and contained details on marking, action on casualties and stores. They are annexed in the Sqn War Diaries, but unfortunately are too long to include in their entirety although they are commended to the reader. See Ferguson K du B, op cit., end of AF C. 2118 for Jun 44.



Invasion Beach at Lion-sur-Mer³



DD Tanks with flotation screens raised⁴

The Sherman DDs met with various success.⁵ The launching distance for the Sherman DDs was eventually reduced but the rehearsals could not fully represent the real thing. In the event the Sherman DDs of 13/18th Hussars on the eastern beaches launched 500 yards short and were able to cover the disembarkation plus the move inland until the open country beyond was reached. In the centre the Canadians launched from 1000 yards. Consequently, in some areas the disembarkation and assault was not given armoured support.

Obstacle clearance both above and below the high-water mark were to be done by clearance teams. These teams consisted of flail detachments from the Royal Armoured Corps and AVREs of the Assault Squadrons RE. Each AVRE carried fascines, petards, bridges or bobbins most suited to the type of obstacle they would encounter. Picking up 3 Troop, 77 Assault Squadron's story again:

³ Source: *The Story of 79 Armoured Division*, op cit., p. 44.

⁴ Source: *Royal Engineers Battlefield Tour – Normandy to the Seine*, op cit., Annexure III, Photo 1, p. 165.

⁵ The plan was for the tanks to be launched 1,000 yards out and travel into the beaches at a maximum speed of 4 knots. The LCTs carrying the infantry and engineers would carry their men and equipment onto the beaches travelling at a speed of ten knots. See Duncan N W, op. cit.

Our Craft had not gone far when we hit a submerged obstacle and had to back off. There was a loud explosion on our left, I caught a glimpse of 1 and 2 troops LCTs going in on our right, and then a very charred craft passed us – it was 4 Troop – and they had no Boase Bangalore on board. (this weapon consists of twin 3-inch tubes 20 ft long filled with explosive.) We were also carrying one, and it was now obvious that it was unnecessary; so we cut it adrift and tossed it over the side, much to the troops' relief.

Suddenly we saw the first row of obstacles loom out of the smoke. They were ten feet high and consisted of a vertical log capped by a Tellermine and reinforced on the seaward side by a ramp. The LCT moved in, and we found the obstacles were in 4 ft of water instead of being on dry ground as had been intended. We beached against the side of one of the ramps, the door was dropped, the gapping team went ashore and carried on with their job.

While the gapping was in progress, the obstacle clearance team disembarked.⁶



Typical Beach Obstacles⁷

The first task for the clearance teams was the removal of explosive charges on the top of the obstacles in the areas of the beach where it was proposed to land. They then had to remove the obstacles themselves until the rising tide prevented further work. Once complete on initial lanes they were to continue working to increase the frontage. Army Engineers carried out work both above and below the high-water mark not the Navy. A clear area of responsibility had been established as is described by Lt Dickinson:

Obstacles from a depth of 10 feet to 4 feet 6 inches were the responsibility of the Landing Craft Obstacle Clearance Units of the Royal Navy, and those from 4 feet 6 inches to 0 feet were a sapper responsibility. Each beach, White and Red, was allotted five AVREs for obstacle clearance. Our latest information before leaving was that the obstacles were laid in four rows in the following order from the dunes to the sea; Two rows of hedgehogs, stakes, and ramped stakes.

The intention was to land with the tide lapping the bottom of the ramped stakes. we were to pass through these, drop our porpoises (Waterproofed steel sledges carrying ammunition and explosive) on the beach, and then return, remove such mines as we found on the ramped stakes and then either run them down or tow them away. Having completed row c we were to go to b, and so on. We had prepared two methods of doing this; Firstly, by towing - for this a series of slings had been attached to the back of the AVREs, and to these were hooked smaller subsidiary slings by the following personnel, the latter slings having been first attached to the obstacle which it was required to shift. Or secondly by blowing – for this we had prepared waterproofed charges, which were to be used to blow the obstacles.

These methods had been worked out and practised at Littlehampton prior to the invasion. In addition, immediately on landing we were to erect beacons for the navy to enable them to navigate into clear areas. We had all this drill firmly set and it was with this in mind that we had set out for Normandy.⁸

⁶ Quoted from Dickinson, Lt I C, op. cit., pp. 80 – 81.

⁷ Source: *Royal Engineers Battlefield Tour – Normandy to the Seine*, op cit., Annexure III, Photo 10. p 171.

⁸ Ibid., p. 81.

However, all did not go according to plan. When the teams arrived on the beaches the timing was incorrect, and the correct depth of water was more than expected. Major W Carruthers MC, then in command of 3 Troop takes up the story:

At this time, it is as well to describe the beach. In the planning we had expected a 400-yard stretch of beach; on arrival we found it to be 100 yards. As a result, most of the obstacles were in the water with only their tops showing, making the task for the beach clearing teams, composed of AVREs and 629 Field Squadron, extremely difficult.⁹

Onshore wind meant the tide was high and most seaward obstacles lay in 4 to 6ft of water instead of 2ft. In addition, the heavy swell made removal of obstacles impossible and armoured elements of the clearance teams could do no more than crush a portion which stood in shallow water. The clearance of the explosive devices in particular are described in Lt Dickinson's account:

The conditions we met were very different. Firstly, and most importantly, the sea was rough and 4 foot up the ramped stakes, secondly there were Tellermines on every stake and shells on all the hedgehogs. This we took in as we came ashore. Soon we had more trouble. 629 Field Squadron's LCIs landed in a bunch on the left of the LCTs and suffered heavy casualties from machine guns on disembarking. One of the obstacle clearance AVREs could not disembark from 4 Troop's LCT, and LCT 110A was an hour late in arriving. As a result, the right-hand sector of white beach had two AVREs and their crews, and the left-hand sector one and crew. One of the AVRE received a direct hit killing two of the crew, and that left two AVREs with twelve men to do something about clearing the obstacles on White beach.

We began by removing shells from the hedgehogs and stacking them in German weapon slits. We then towed the obstacles away. The main problem, however, was the Tellermines on the stakes. We had been given orders to save these mines for future use, so, as soon as a flail had completed its flogging, it was taken into the sea to act as a platform, and we went from stake to stake removing the mines. The waves were breaking over the top of the turret, and so the commander had to keep closed down, while the man on the outside removed the mines. Then we received the unwelcome attention of a machine gunner in one of the beach villas who, after some very poor shooting at 75 yards range succeeded in scoring an outer. By this time, the waves were too high, so we had to come ashore just before the flail engine gave out. The mines were removed from the back of the tank and put in disused German defences. On our sector of the beach, we did not put up any navigational beacons for the navy, as had we done they would have assumed that the sector of the beach bounded by these was clear, which was not the case.¹⁰



Flail Wading Ashore



Flail in Action¹¹

⁹ Quoted from Carruthers, Major W, MC. 'Gapping on Queen Sector White Beach with 3 Troop 77 Assault Squadron', *Royal Engineers Battlefield Tour – Normandy to the Seine*, prepared under the direction of Chief Engineer BAOR 1946). p 82.

¹⁰ Quoted from Dickinson, Lt I C, op. cit., p. 81.

¹¹ Source: *Royal Engineers Battlefield Tour – Normandy to the Seine*, op cit., Annexure III, Photo 3 and 4. p 166.

629 Field Squadron, elements of who were working with 77 Assault Squadron, were not armoured. They landed 10 – 15 minutes later, by which time the obstacles were in 6 – 8 ft of water. Swimming men cleared the mines on the outer rows. Even though fire was intense and the unit suffered severe casualties, several mines and explosives devices were detached, defused and dropped in to the now quickly deepening water. Many men drowned trying to clear the mines. In the event, the obstacles didn't seriously interfere with the landing craft and many devices failed to explode.¹²

Three Troops of 77 Assault Squadron RE beached at H-hour but, as already mentioned in Dickinson's account, the LCT with the fourth troop came under heavy fire, killing Lieutenant Colonel Cocks, Commanding Officer of 5 ARRE. Captain A Low of No 2 Troop, OC of one of the gapping teams recounts:

In rough seas and under heavy cloud an invasion armada bore down on the coast of France. In that colossal adventure there sailed 2 Troop, 77 Assault Squadron RE in LCT 1092 commanded by Lt Wigley RNVR. In the craft travelled two Sherman flails commanded by Sjt Smyth and Cpl Nash, both of 22 Dgns, a plough commanded by Maj K du B Ferguson RE, Squadron Ldr 77 Squadron, a Boase Carpet commanded by me, a bridge commanded by Sjt Myhill RE and a Bobbin Commanded by Cpl Gregory.

About 1200 yards out, the house (known to us all as 'Sad Sack villa') was spotted, and the LCT commander set course to land ten yards to port of the house.

At this time the Navy was bringing down heavy fire on the beaches and the RAF were bombing itself to hell.

We were ahead of the DDs tanks of 13/18th H, due to touch down at 7 ½ minutes before we did at H-hour. All craft were ordered to stop engines to allow them through. Approximately 100 yards offshore the LCT (R) opened up with two salvos, followed by one salvo a little later. Rockets collided in mid air and rained down on craft waiting to go in. One landed immediately under our starboard bow showering the bridge with pieces of casing.

LCT were then ordered to the beach at full speed. Our gaps were hidden by dust showered up by the barrage brought down on the beach, but at 300 yards out the building was again visible a bit to port. 1 Troop had just seen their gap and were coming hard over to port. Being slightly behind them, we endeavoured to swing to port with the object of touching down on 'Sad Sack Villa'. This was impossible as another craft had run aground in our way and was jamming the gap between this craft and 1 Troop, who were close to the beach. A decision was made to beach 150 yards to starboard of 1 Troop and the LCT actually touched down 80 yards to starboard. Twenty yards from the beach touchdown, the craft was attacked by four planes with British markings, two bombs landing very close to our doorway. Two Oerlikon guns on the craft were being used both against the aircraft and the houses on the beach, which contained snipers and machine guns, whose sole purpose in life was to make the bridge of the craft uninhabitable. I scrambled down to my tank, ordering LCpl Parsons and Spr Manuel to cut holding ropes on fascine bundles on the port side of the craft. We then climbed onto the tank as the door was drooped.¹³

The conditions on the beach for the gapping teams were no different from that experienced in the water by the obstacle clearance teams described by Dickinson above. Capt Low summarised the experiences of 2 Troop thus:

Ahead of us was a gun apparently concentrating on the troop to our left. Sjt Smyth ran his flail up to the high-water mark and began flailing straight for the gun. Cpl Nash followed, widening the Gap.

Maj Ferguson ran his AVRE off the craft and began an attempt to clear obstacles on the beach. I followed out with the Boase carpet, running up to the gun and turning right along side the flail path.

Sjt Smyth had flailed a second path up to the sand dunes, and this I used to push the Boase Bangalore into a sand dune about six feet high. During this time Sjt Myhill was running up the

¹² The fast-rising tide and congestion of vehicles arriving off landing craft slowed up the removal of obstacles, but an assault RE crew under Serjeant Barclay, did a fine job of work, disarming 64 tellers and 37 shells before last light. A good half of these were dealt with by Sapper Glancy climbing each time to the top of the 10 ft stakes. See *The Story of 79 Armoured Division*, op cit., p. 47.

¹³ Quoted from Low, Capt A, 'Operations on D Day with 2 Troop 77 Assault Squadron', (*Royal Engineers Battlefield Tour – Normandy to the Seine*, prepared under the direction of Chief Engineer BAOR 1946). p 78.

beach with his bridge. He dropped it on the edge of the gun position but apparently had trouble in releasing the bottom end. He leapt out of the turret and dealt with it.

I was experiencing trouble cutting the rope tackle on the Boase Bangalore which had been pushed very easily into the dunes, as snipers kept up a steady hail of lead wherever I appeared. I ordered Sjt Myhill to carry on through to the second lateral in my place.

He could not display his windsock as it had been shot off, and I ordered Cpl Gregory, who had been sitting hull down in the water forward to use his.

By this time grenades were being flung at my tank, so I poked my head out and dealt with the offender, then cutting the Boase Bangalore loose. Drawing back from the dune I saw the Bangalore explode, having been hit. It made a good gap in the dunes, but I did not drop the carpet on it as both flails had gone forward.

The beach was being shelled, and snipers were very active. Running back along to the bridge we started to mount it, but the right support of the carpet was blown away and the logs dropped onto the bridge. We drew back and stopped. Spr Young, Cpl Parsons, Spr Manuel and I got out and attached a tow rope to the last log, and the AVRE pulled the carpet back off the bridge. Some Pioneers were lying behind at the side of the Tank under cover. These I ordered to help straighten out the carpet to form a straight run on to the bridge. We eventually did the job, but for four logs, on our own.

We nipped back into the tank and crossed the bridge, and the Anti-tank gun.

The infantry, who had landed right behind us, were now pushing forward.

As we reached the top of the bridge, I saw Cpl Nash standing behind his flail which had struck a mine, breaking a track.

Sjt Myhill reported that he had cleared the roadway 300 yards along to the right. I ordered him to turn around and contact 1 Troop on the left but reached 1 Troop myself before he did.

A call from Maj Ferguson informed me that the windsock was not flying, and Sjt Myhill went back to the beach to chase it up. He did not reappear, so I went along to the beach on foot, being unable to clear my tanks on the crossroads although the second lateral was being shelled and mortared.

On reaching the beach, I discovered that only a part-coloured windsock had been available and the yellow had been torn off to make a fully coloured one. This windsock had been erected by Sjt Myhill, Cpl Arnold and Spr Spiers. Having completed the erection of the Sock the men were getting back in the AVRE and an MG opened up killing Sjt Myhill and wounding Spr Spiers.

I found on arriving back at the beach that the bobbin had just been dropped complete, the bracket being knocked off.

Snipers were still busy, but a Sherman was holding up the traffic through the gap, so we cleared it away and returned to the crossroads where vehicles were managing to advance up the road.

We climbed aboard and carried on to the Squadron rally, our Gap complete and passing vehicles.¹⁴



SBG Bridge over ditch at head of Beach¹⁵

¹⁴ Ibid., pp 78 – 79.

¹⁵ Source: *The Story of 79 Armoured Division*, op cit., p. 45.

No 1 Troop, who were to the left of No.2, had mixed fortunes. Unfortunately, the first AVRE was hit and drowned. The crew did however manage to dismount and made their way forward on foot. No. 1 Troop's Crabs managed to flail successfully over the dunes, negotiated with RE assistance. Bridges and bangalores were jettisoned as no longer required. Sergeant TR Kilvert commanded an AVRE in 1 Troop:

We stood too at dawn on board the LCT 100A at 0500 hours. Breakfast was on, but nobody really wanted it, being more or less seasick. I had AVRE 1 C started up, all guns loaded and a last-minute check over the tank. It was now about 0610 hours and the coastline stood out in the haze; we were coming in fast. About half a mile out everyone mounted their tanks. Almost in, 400 yards to go when 1 C had a violent shake, we had been hit. Damage not known because the LCT had also sustained damage a bit forward and we had to get off at once.

The LCT stopped: H Howe and H George in front moved off; again 1 C was hit. Going down the ramp now and the water was almost up to our cupola. Again, we were hit but on our Bobbin, it being at a crazy angle. Coming up out of the water, hit again and at last dry, and following 1A up the sand. Hit a mine, one bogey gone, but, following in 1A's track, we were ordered to put up a windsock, 1A having lost his. Struck a second mine, two bogies and left track gone.

LCpl Fairlie and Spr Vaughan jumped out to put up windsock. LCpl Fairlie was blown up by a mine as he came round the tank. I ordered abandon tank, take all arms, and jumped out myself, destroyed 'slidex and code papers'. We were all out now, petrol was pouring out of 1C and filling the mine crater.

Everyone lay down whilst I looked for the LCpls remains. None found so I returned and organised the crew into a fighting patrol. Just then L Sjt Freer from 3 Troop joined us; he had swum ashore from his tank which had been on our LCT. Moving up the beach we passed Capt McLennan in 1A, stood on the gap top. I ordered a defensive position and to consolidate in front of 1A on the crossroads.¹⁶

No 3 team meanwhile completed two exits using bridges and carpets. This was achieved despite one bobbin sustaining damage in landing and subsequently drowning.¹⁷

Despite heavy casualties to tanks, the gapping teams succeeded in opening four exits within an hour on Queen White Beach (77 Assault Squadron and the flails of the 22nd Dragoons) and interconnecting them in-land. On the left on Queen Red Beach (79 Assault Squadron's area) the teams suffered from heavy enemy fire and to a great extent were reduced to clearance by hand. Damaged tanks blocked their first two lanes, and it was not until 1½ hours after 'H' hour that the first gap with laterals was opened. However, two more gaps were opened within 15 minutes of the first.¹⁸ Sjt Kilvert describes the battle beyond the beach itself:

Asking the Troop leader to cover us, we moved forward behind the leading flail, until he reported no more mines in the road ahead. Again, we consolidated. I went back to the beach to bring up the troop. Capt McLennan had now advanced through the gap and was followed by 1B, who stood at the exit a little to one side. I collected LSjt Freer's crew and a couple of infantrymen and brought them forward to our advanced position.

Again, we moved forward (we thought) until a bend of the road cut them, 1A and 1B from view. We advanced in short bounds to the high wall of the large farm. Here we split into three parties, one covering the main road or killing zone, another as rear protection and a third as house clearance.

It was then that fire came at us from three sides, but bursts from our two Brens brought a lull. Shooting open the garden door, I advanced, covered by my L/Sjt and Sprs Lewis and Hand, up the two paths and raked the whole front of the house part of the farm with fire, killing, we later found eleven of the enemy.

¹⁶ Quoted from Kilvert, Sjt T R, 'Landing at Hermanville with 1 Troop 77 Assault Squadron 6 Jun 44', (*Royal Engineers Battlefield Tour – Normandy to the Seine*, prepared under the direction of Chief Engineer BAOR 1946), p. 77.

¹⁷ No 3 team's craft actually grounded on top of a drowned DD tank. The crabs successfully completed a lane which was then carpeted and a second one in which the SBG was dropped. Later the crew under Sgt Nutley RE had to lift the bridge under small arms fire, which caused them to interrupt work at frequent intervals until they had silenced the enemy. The Bobbin hit a mine and was then hit by anti tank fire and drowned. One bulldozer also struck a mine and could not be used. See *The Story of 79 Armoured Division*, op cit., p. 46.

¹⁸ See *Royal Engineers Battlefield Tour*, op, cit., et al., p. 32.

We rushed the house with hand grenades and searched it from top to bottom. Going out into the yard we found an air raid shelter and the civil occupants of the farm.

Spr Hand, who spoke the lingo, obtained the information that the big house (on the Corner of Hermanville itself) housed about 200 of the enemy. I then reorganised the party, sending two runners back to Capt McLennan. Using the road ditch and the garden wall as vantage points we advanced 60 yards when Spr Vaughan opened fire with a Sten gun on an enemy party coming down the road towards us.

Immediately everyone opened fire, and with two Sjts with 100-round magazines on their Bren guns this scattered the enemy. An SP gun then came up, followed shortly after by the infantry and Lt Tennent on foot. We then handed over to a RA Major and moved to our RV in a field opposite. On Capt McLennen's instructions we used a detector and tested for mines.

Later the OC arrived, and we assisted in the removal of two injured members of the crew.

I reported to the OC and we moved into the squadron rally RV.¹⁹

Some of the AVREs moved forward to assist a Commando attack on Lion-Sur-Mer, where 77 Assault Squadron provided 3 AVREs to support 41 RM Commando in the reduction of stubborn defences at Lion-Sur-Mer on the afternoon of D-Day. The AVREs themselves couldn't close to petard range and all fell victim to 50 mm guns which penetrated the tanks with ease. Unfortunately, Troop Commander Capt McLennan was killed during the action. The liberation of the town led to a friendship between the town and the Squadron, which still exists to this day. Capt Lowe, picks up the story at the Squadron RV:

During briefing, it had been decided that AVREs of 77 Assault Squadron should support A Coy 1 S LANCS Regiment and 41 RM Commando, in an attack against a strong point at Lion-sur-Mer.

At Squadron Rally, Lt Tennent and myself were instructed to go forward into Lion-sur-Mer and contact these units.

It was discovered that only the remnants of A Coy 1 S LANCS Regiment remained, and they had been withdrawn by CO 41 RM Commando. The Commando had itself suffered heavy casualties from mortar and machine gun fire within the position.

Lt Tennent returned to rally to get two tanks, whilst I made a recce on foot. It was decided to send three AVREs up the main street, each covering a section of RM Commandos, led by Capt P Dunnet who was later killed by machine gun fire.

One AVRE of 2 Troop, commanded by Lt Tennent, came up. A few minutes later one AVRE of 3 Troop commanded by Capt McLennen RE appeared in the main street. He was called under cover and turned around.

Capt McLennen took the first section of RM Commandos up the road, and I in my AVRE took the second section 20 yards in the rear. Lt Tennent followed up in the rear with the third section.

Heavy fire from riflemen in the houses on either side of the street was quietened down by Besa fire.

Capt McLennen had a petard bomb loaded and it was ignited by bullets. He stopped, and a gun which was not known to be there opened up, the first shell striking the drivers visor and severely wounding the driver. A second shell penetrated the turret, killing Cpl Shea, the demolitions NCO.

At this juncture, men began to come out of the tank, which was filled with smoke, the smoke mortar bin having been hit. Spr Norris was seen covered in blood staggering back down the road. I covered him while he came down as far as the tank where another man attended him. Commandos then dashed for cover taking wounded with them. A smoke screen from Capt McLennens AVRE now covered the gun position. Capt McLennen was seen to jump out of his tank and was hit, possibly by hand grenades, which were being thrown at the time.

¹⁹ Quoted from Kilvert, Sjt T R, op cit., p 77.



AVRE advancing²⁰

I moved up using the AVRE in front as cover from the gun. Covered by me, Lt Tennent came up on the right. Heavy fire was coming from a house on the left, which was believed to contain a mortar position. I fired one round of Petard at it. Fire ceased.

Lt Tennent came up level, but his loaded petard became ignited, and the gun opened up again hitting him in the turret and killing the wireless operator, Spr Treadrea.

Lt Tennent reversed down the road but was hit again and had to abandon the AVRE, the Petard bomb still burning.

I tried to advance to use the Petard as a mortar, but the co drivers' plate was hit wounding the demolition NCO Cpl Parsons. The tank was reversed, but another shell hit the drivers visor block, wounding the driver and upsetting the controls.'

'More Besa was fired at the gun, but it was too well dug in and I decided to abandon tank. As the crew was beginning to bail out, the turret gun mantlet was hit and the gunner killed. The crew bailed out and took cover with some commandos behind a wall. No attempt at reaching Capt McLennen's body was possible, and the troops withdrew halfway down the road. It was reported that some wounded were still up behind the wall, and I ran back covered by a marine. Everyone had got out, so I returned down the road.

Two days later the position was captured.²¹

By nightfall the 79th Division had succeeded in establishing a toe hold on the French coast. 22nd Dragoons lost 8 killed in action, 8 wounded, 4 missing and 12 Crabs. 5th ARRE lost 24 killed, 46 wounded, 49 missing unaccounted and 22 AVREs, over 50% of their armoured capability.²²

77 Assault Squadron lost Capt McLennan, Sgts Myhill and Wingate, LSgt Spender, Cpls Brotherton and Shea, LCpl Fairlie, and Sprs Manuel, Treadrea and Winstanley killed in action (1 + 9). Capt Carruthers, Lts Charlton and Dickinson, Sgt Findlay, LSgt Linsell, Cpl Parsons, and Sprs Spiers, Johnston, Setterfield, Morris, Elliot, and Sampson (3 + 9) were wounded and evacuated. The final state of AVREs was 3 destroyed outright, 1 beyond repair, 4 repairable and 5 fit. Two flails were lost on the Squadron front and a further two flail commanders were killed.²³

²⁰ Source: *Royal Engineers Battlefield Tour – Normandy to the Seine*, op cit., Annexure III, Photo 3 and 4, p 165.

²¹ Quoted from Low, Capt A, op. cit., p 79.

²² See *The Story of 79 Armoured Division*, op. cit., et al., pp. 53 – 54.

²³ These were reported at the end of D-day, 6 Jun 44. On the 10 Jun, reinforcement from 26 Assault Squadron arrived in the shape of Capt Hewitt and three AVREs with crews complete, plus two AVREs manned by Sgt Freer and crew, Capt Low and fresh composite crew. The Squadron reorganised into three troops based on comd by Lt Tennant, Captains Low and Hewitt respectively. See Ferguson K du B, op cit.



View of Beach at Lion-sur-Mer, taken from gun position shows DD tank and crashed Thunderbolt.²⁴



Second View of Beach at Lion-sur-Mer, the mass of bogged and stranded tanks and craft on D + 8.²⁵



Bottom Left and Right – Views of SBG Bridges at head of beach²⁵

Lt Dickinson writes of the Squadron's achievements thus:

*For the work done on D-Day, 77 and 79 Assault Squadrons between them won two DSOs, four MCs, two DCMs and three MMs. The Assault Engineers, though hardly any of their number had seen action previously, had proved their worth, and made the 'Bulls Head' a Divisional sign which they were all very proud to wear.*²⁶

²⁴ Source: *The Story of 79 Armoured Division*, op. cit., et al., p. 52.

²⁵ Source: *The Story of 79 Armoured Division*, op. cit., et al., p. 52.

²⁶ Quoted from Dickinson, Lt I C, op. cit., p. 81.

26th Assault Squadron Royal Engineers Breaching Teams JUNO Beach, MIKE RED/GREEN Sector

Location: Graye-sur-Mer

Perhaps the only real lesson was that the unexpected must always be expected in war. Use all your imagination to evolve original and demanding types of training before you go to war, but, when you do go, be prepared to meet unforeseen situations without hesitation.

– Major Tony Younger RE

Officer Commanding 26th Assault Squadron Royal Engineers on 06 June 1944

I can see the Bridge AVRE moving through the beach obstacles behind them when there is an explosion on the turret and the bridge falls uselessly. The AVRE tries petarding the seawall for some time but without success. I then move up to the foot of a concrete ramp leading to the top of the wall...We then back off and let another AVRE climb the ramp to push wreckage away, but it tips over on its side, one track off the ramp. Another AVRE goes up the narrow ramp and pushes the wreckage to one side – and sets off a mine which halts it on top of the wall.

– Captain Ian Hammerton

Flail Troop Commander, B Squadron, 22nd Dragoons on JUNO beach

The Plan

The D-Day objectives of the 3rd (Canadian) Infantry Division (3 (CAN) Inf Div) were the capture and clearance of the coastal villages and towns along JUNO Beach, particularly Courseulles-sur-Mer, Saint-Aubin, and Bernières-sur-Mer, along with various other villages inland. Their tasks were broken down into three objective lines, YEW, ELM, and OAK. The final objective for the first day was intended to be on line OAK that ran along the railway line just south of the N13 road from Caen to Bayeux. The 3 (CAN) Inf Div was then to reorganise in preparation for a further advance and to repel any enemy counterattacks.

The Division was allocated JUNO Beach, which was divided into two sectors – NAN on the left and MIKE on the right. The assault was on a two Brigade front with 7th (Canadian) Infantry Brigade (7 (CAN) Inf Bde) landing at Courseulles on MIKE/NAN sectors and 8 (CAN) Inf Bde landing at Bernières on NAN sector. 8 (CAN) Inf Bde was to be closely followed by elements of 4th Special Service Brigade (4 SS Bde), charged with 'mopping up', making contact with the Commandos of British 3 Inf Div and No. 48 (Royal Marine) Commando in particular, with capturing the German strongpoint at Saint-Aubin. 9 (CAN) Inf Bde, the follow-up Brigade, was scheduled to land in either the 7 or 8 (CAN) Inf Bde areas according to the progress made.

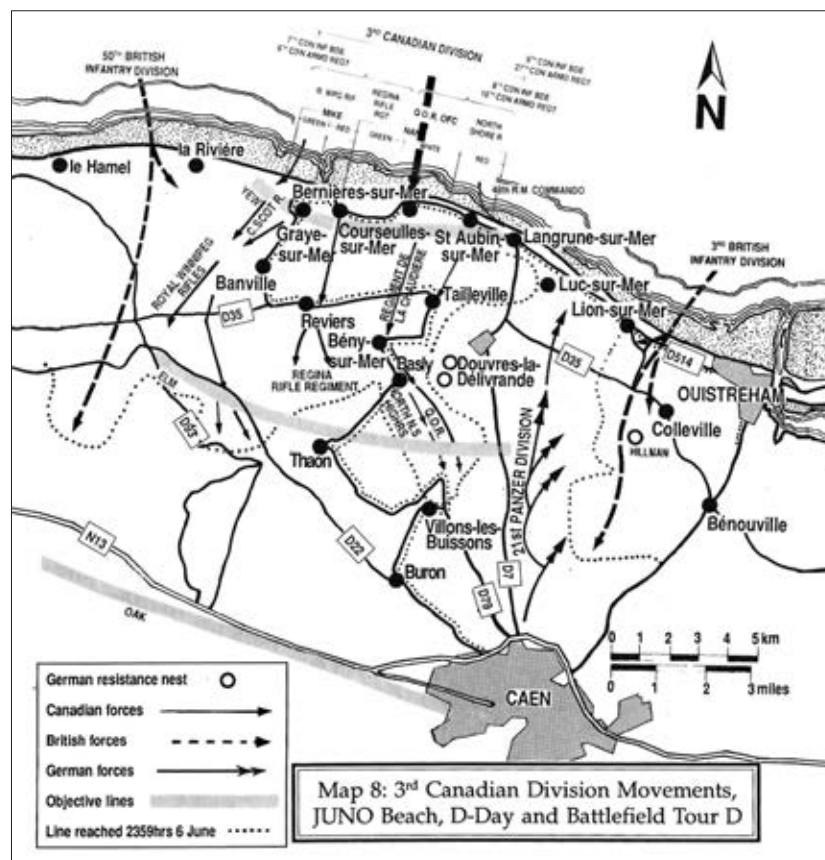
7 (CAN) Inf Bde would initially assault at H-Hour with the DD tanks of the 6th (Canadian) Armoured Regiment (1st Hussars), followed by an assault with two Battalions up – The Royal Winnipeg Rifles on the left (MIKE RED/GREEN) and the Regina Rifles Regiment on the right (NAN GREEN). Further support to the Brigade was provided by the 'Funnies' of 26th Assault Squadron Royal Engineers (26 Asslt Sqn RE) and the 'Crabs' of B Squadron 22nd Dragoons. Similarly, 8 (CAN) Inf Bde would initially assault with DD tanks from 10th Armoured Regiment (The Fort Garry Horse) along with The Queen's Own Rifles of Canada (NAN WHITE) and The North Shore Regiment (NAN RED). Also, on call to each Brigade was fire support from the 107 mm mortars of The Cameron Highlanders of Ottawa.

What Happened

During the night of 5 June and the early morning of 6 June, RAF Bomber Command hammered the German positions along JUNO beach. At dawn, the US Air Force took over and was soon joined in the bombardment by eleven destroyers and various other support craft.

The main assault was to begin at 0745 hours. However, the crossing for the troops at sea was so rough that the time for the assault was put back 10 minutes in order to allow the landing craft to get into position. Despite the initial bombardment many of the German positions had been unaffected and put up considerable resistance. However, with the help of the DD Tanks and 'Funnies' most of the obstacles were eventually overcome and the Canadians began their advance inland.

By the evening of the first day 3 (CAN) Inf Div had landed 21,400 men, 3,200 vehicles and 2,100 tons of stores on the shore. The Division had advanced well beyond the intermediate line ELM and some tanks had even reached line OAK along the N13 road from Caen to Bayeux, but were forced to withdraw due to lack of infantry support. Indeed, men from the Division had made the greatest gains of D-Day, penetrating up to 7 miles inland in some places. Sadly, in the course of establishing their bridgehead the Canadians had lost 304 killed, 574 wounded and 47 captured. Several strongpoints also remained intact as D-Day ended and No. 48 (Royal Marine) Commando had been held up east of the strongpoint at Saint-Aubin. Nevertheless, liaison had been established with 50th (Northumbrian) Infantry Division on their right, though the failure to link up with the 3 Inf Div on their left allowed the German 21st Panzer Division (21 Pz Div) to penetrate into this dangerous gap. Over the following days the area saw fierce fighting before the Germans were eventually ejected.



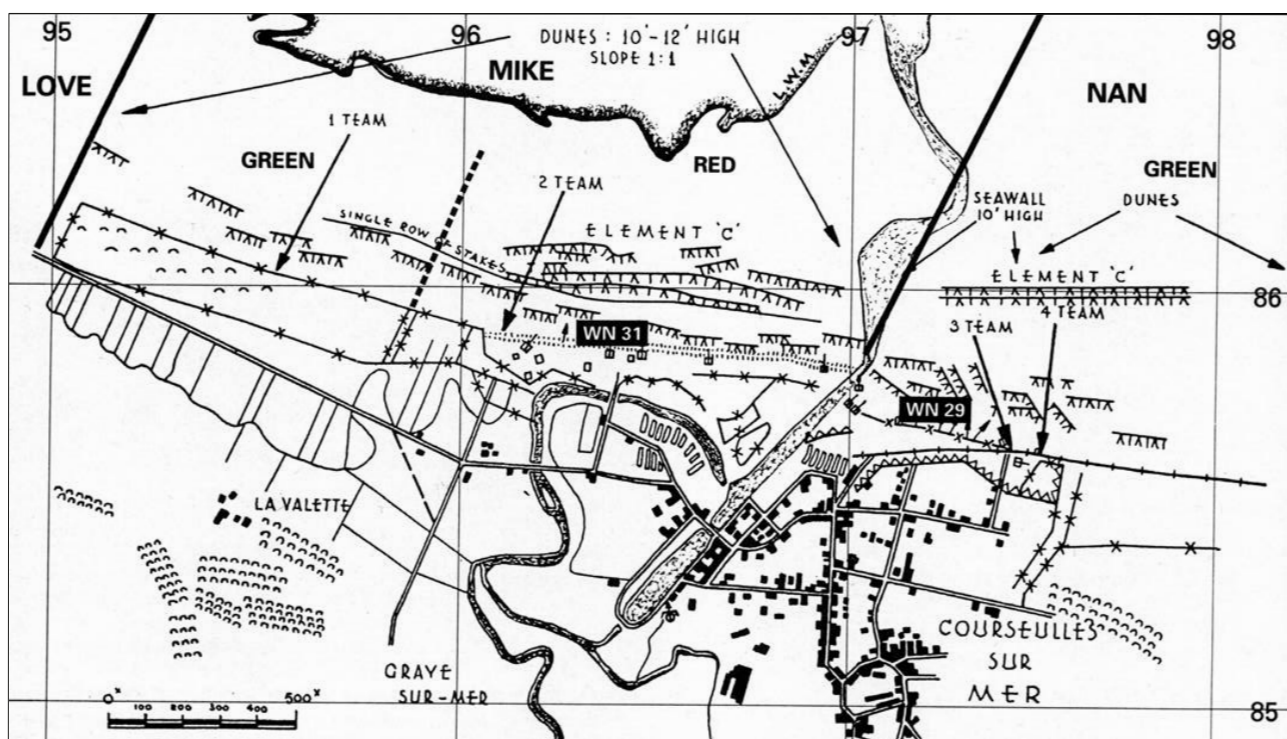
3 (CAN) Inf Div movements on JUNO Beach, 06 June 1944.

THE STORY OF SAPPER W G DUNN, 26 ASSAULT SQN RE

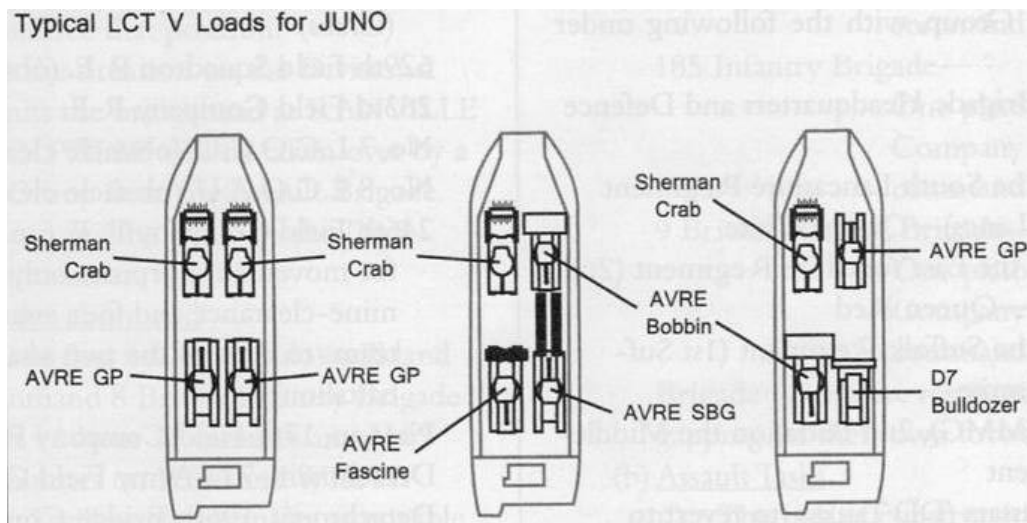
Until the mid-1970s, there was a bridge at the village of Graye-sur-Mer where the road from the village to the beach goes over a stream in the marshy land behind the dunes. The bridge, or most of it, was built between 0800 and 0915 hours on D-Day and was a masterpiece of improvisation under fire. It was also a good example of the use of the specialised armour.

On D-Day George Dunn, a 20-year-old coalminer from Sunderland, was a driver of Churchill AVRE '1 Charlie' belonging to 1 Tp 26 Asslt Sqn RE. George's first impression of the beach when he peered at it through his narrow visor was that the beach was a lot narrower than it ought to have been due to the higher tide than predicted. His second impression was of the dead or wounded men lying so thickly on the beach that he wondered how he would manage to drive between them. But right in front of him was the gap in the dunes that he had seen so clearly on the photographs and beyond it he knew he would see the road and the tank trap and the broken culvert. Lance Sergeant Jim Ashton, the tank commander, and the rest of the crew of the tank knew exactly what to do: follow the Flail tanks through the dunes and along the road to the culvert; drop their fascines in the gap where the culvert had been; drive over it and hold the road junction just beyond it while the Canadian infantry followed across the open ground. That was the kind of thing they had perfected over the last 18 months in getting ready for this day.

There was much less shooting than expected. One of the landing craft had engine trouble and had made George's tank 20 minutes late. By this time, the Canadian infantry and the DD tanks had crossed the beach as far as the dunes and had decimated the first line of German defenders. The Flails, which had landed ahead, went up through the gap, churning a track that was easy to follow. George went after them until he could see over the marsh to the crossroads and the house beyond it. The tank trap barred the way – a ditch 4.5 m wide and 3 m deep. That was not their job and George pulled aside while another AVRE, which should have been in front, came past and released its fascine into the ditch. The Flails queued up and followed it over the tank trap, a delay of no more than a few seconds.



German defences on MIKE RED/GREEN sector.



Typical LCT loads for JUNO beach on 06 June 1944.

There were some machine-guns and mortars firing from the houses on the crossroads, but safe enough for tanks. More Flails crossed and cleared the road to the broken culvert 50 m beyond, and then they drew aside: it was now George's turn. The last 5 – 10 m of road surface before the culvert had been destroyed. Beyond the broken end of the road, George saw through his visor a few yards of sand and weed and then a narrow strip of water where the stream flowed through.

'Looks all right,' he heard Ashton say and on the radio the Troop Commander told them to carry on. George eased the tank forward on to the patch of weeds, her nose dipped, and he saw the weeds part and water gleaming through and he started to slide. He had stopped the tracks, but she went on sliding and then she fell and the daylight through the visor was cut off and she stopped with a crash. The water fell on top of George and before he could catch his breath it was over his head. He struggled to get out of his seat, Ashton or Sapper Roy Manley, the tank's radio operator, grabbed him by his neck and onto the top of the turret. The tank was still sinking and Ashton got him to the bank and shouted, "Run for the dunes."

Blown sand had been lying on top of the water, but after the tank had fallen in and broken the surface it was seen that the gap in the road was 20 m wide. The bridges that the specialised armour carried were only 9 m long. Perhaps nobody would have thought of sinking a tank in the middle of the gap if George had not already done it by mistake, but that was the only possible way to bridge the gap. A bridge carrying tank was ordered up and it dropped the far end of its bridge on top of the sunken tank. Still under fire, the Troop Commander and two other men scrambled out of it and stood on the turret, which was under water, and blew off the wire stop that held the fascine. It dropped into the water but there was still a gap beyond it. More fascines were put into place; more tanks were brought up to give covering fire and troops from the beach carried up some logs that the Germans had left there and threw them in as well. By 0915 hours, an hour and a quarter after the troop had landed, the first tanks and infantry crossed the bridge and rushed the houses by the crossroads from which the machine-guns and mortars had covered the whole operation.

Jim Ashton and his crew, not knowing the use which was being made of their derelict tank, were lying close together on the back of the dunes fed up with themselves for having lost the tank when the battle had hardly started and thinking of the 18 months of training that had culminated in less than 18 minutes of action. George blamed himself.

Ashton was the first to get over the shock; he started singing an Australian ballad. He was singing when he died. A mortar bomb fell right among them. George did not know what happened: something terrible happened, that was all he knew. Roy was lying on top of him. He pushed him off and saw that he was dead and glanced and saw Jim Ashton was also dead and the other members of the crew were lying half-buried and still. He stood up and fell and rolled down the steep face of the dune and opened his eyes again in agony and saw a rough board above his head with a skull on it and 'ACHTUNG-MINEN'. He ran until he fell

again with his left leg crumpled under him. The doctors would never believe he had run on it because it was so badly shattered, but he knew he had. His other leg was wounded too, and he lost his left arm.

1st Assault Brigade Royal Engineers¹ on D-Day

On D-Day, Churchill AVREs of the 1st Assault Brigade Royal Engineers provided invaluable support to the British and Canadian troops on GOLD, JUNO and SWORD beaches; their presence certainly saved many lives on 6 June 1944. Six Squadrons of the Brigade landed on D-Day, about 800 men and 120 vehicles: 22 AVREs were lost and many more put out of action. The Brigade also suffered 30 men killed and 112 wounded. The deaths included the Commanding Officer of 5th Assault Regiment Royal Engineers, Lieutenant Colonel A D B Cocks RE, and one of the Squadron Commanders, Major H G A Elphinstone RE. On D-Day alone, the men of the Brigade won five Military Crosses (MC) (one posthumously), five Military Medals (MM), five Distinguished Service Orders (DSO) and three Distinguished Conduct Medals (DCM), as well as numerous Mentions in Despatches (MiD).

The Site Today

George Dunn's AVRE was recovered in 1976 by members of 26 Armoured Engineer Squadron, descendants of his original unit. It now stands as a memorial to all those who died in the area on D-Day. George was present to witness the event, along with Bill Hawkins, the only other member of the crew to survive that day.



Recovery, 1976



'1Charlie', 26 Asslt Sqn RE Memorial, Graye-sur-Mer

¹ Consisting of 5th, 6th and 42nd Assault Regiments Royal Engineers.

MULBERRY 'B' HARBOUR AREA

Location: Arromanches

To CCO or deputy:

PIERS FOR USE ON BEACHES

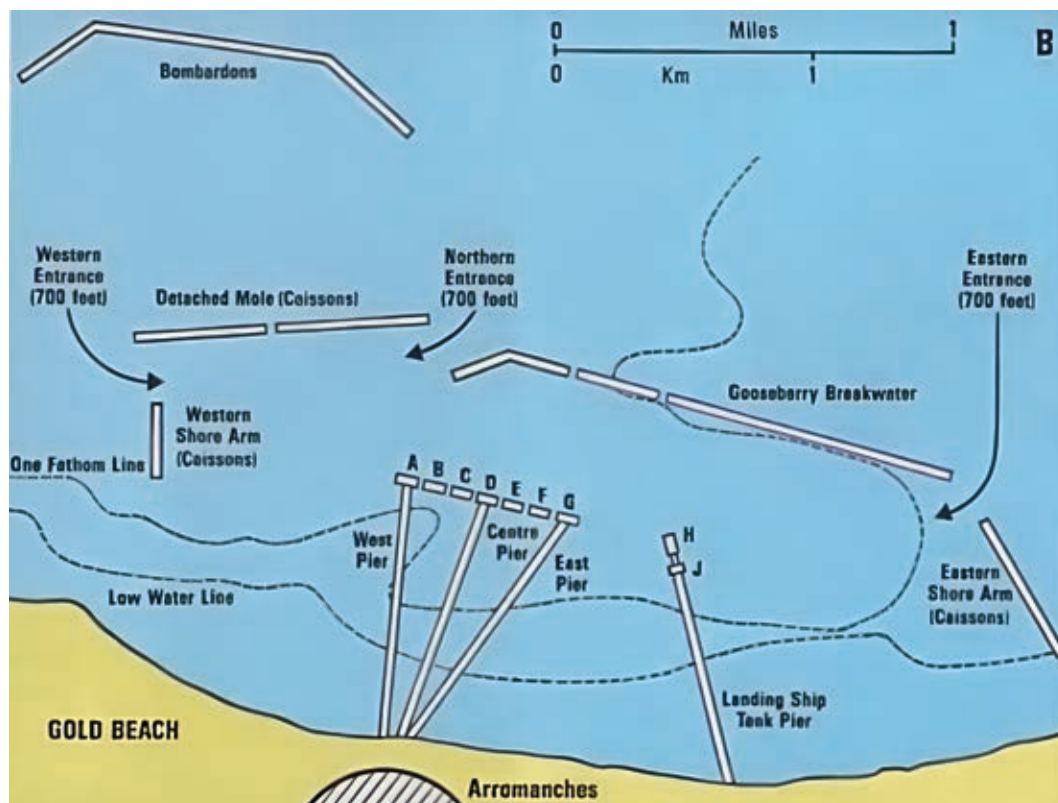
They must float up and down with the tide. The anchor problem must be mastered. Let me have the best solution worked out. Don't argue the matter. The difficulties will argue for themselves.

– Memo from Sir Winston Churchill to Chief of Combined Operations
outlining his initial thoughts for a floating harbour for the invasion, 30 May 1942

The Plan

One of the hard-taught lessons of the Dieppe raid by Commonwealth forces in 1942 was that no major port was likely to be captured early or intact during an invasion of Continental Europe. In Normandy itself, even if Cherbourg could be seized within two weeks, the clearing of mines and repair of damage could easily take two months.

OVERLORD forces would therefore have to be re-supplied across open – possibly congested – beaches, in uncertain weather conditions and at the mercy of the tides. Without adequate materiel the invasion would certainly reach an early culmination point, or, worse still, be thrown back into the sea. With no port available, an alternative solution had to be found if the invasion was to succeed. The solution came in the form of two British-designed and built pre-fabricated harbours codenamed MULBERRY. The harbours were to be towed across the channel and assembled in the vicinity of the landing areas. The throughput capacity of each MULBERRY was set at 7,000 tons a day. Two were ultimately built, one to support the American landings (MULBERRY 'A') and one to support the British and Commonwealth forces (MULBERRY 'B').



The planner layout for MULBERRY 'B' Harbour

Each harbour enclosed over two square miles of water roughly the size of Dover harbour. Outer floating breakwaters (GOOSEBERRIES) sheltered an inner fixed breakwater made of huge concrete caissons (PHOENIXES) five stories high and displacing up to 6,000 tonnes each. When completed, each

MULBERRY would contain over four miles of piers, and almost six miles of floating roadway attached to fifteen pier heads to allow landings. Small coaster and landing ships could unload directly into trucks on the pier heads, while other vessels could transfer their cargoes onto barges within the shelter of the installation.

What Happened

The first components of the harbours were towed across the Channel on D + 1; by D + 5 the GOOSEBERRIES had been set up; by D + 12 both MULBERRY harbours were in use and Landing Ship, Tank (LST) could now off-load over 60 vehicles in 30 minutes or less.

On 17 June a favourable meteorological report presented an opportunity to tow much of the remaining roadway across the Channel. Unfortunately, within sight of the harbours a furious and unforeseen gale blew up and the roadways were sunk.

For three days and nights the storm raged. All Channel convoys remained in port and in Normandy many ships broke from their anchorages and were dashed onto the shore. By the third day the harbours had started to break up, especially the more hastily erected MULBERRY 'A', which was effectively destroyed. The unloading of stores was also significantly affected, falling from 24,000 tons a day to just 4,500 tons – almost all through the Arromanches site. After the storm MULBERRY 'A' was abandoned and for them everything would now have to be unloaded directly onto the beaches.

During the 10 months that MULBERRY 'B' was used some two and a half million men, half a million vehicles, and four million tons of supplies passed through, an extraordinary feat of logistics and engineering.



The end result: MULBERRY 'B' Harbour opposite Arromanche

SUNDAY 29 SEPTEMBER 2024

Chapter Seven THE CONSTRUCTION OF THE FIRST LANDING GROUNDS IN FRANCE

Reference Jlfap8: 1 : 100,000 FRANCE Sheet7F Plates IV and V

(I)

The Airfield Construction Plan

Planning for the initial stages of operation OVERLORD included the construction of the following types of landing grounds:

- (a) ELS (emergency landing strip), consisting of a reasonably flat strip of ground, roughly graded, with a minimum length of 1,800 feet.
- (b) RRS (refuelling and rearming strip), with a minimum length of 3,600 feet with two marshalling areas of 100 yards by 50 yards at each end. Otherwise specification as for ALG given below.
- (c) ALG (advanced landing ground) for fighters, to have a minimum length of 3,600 feet with dispersal facilities for 54 aircraft, width of runway 40 yards with 20 yards shoulder on either side, longitudinal gradient of 1 in 40, transverse gradient of 1 in 40 and a radius of turning of 80 feet on taxi tracks; for fighter bombers to have a minimum length of 5,000 feet.

The accumulative airfield requirement of the AirForces up to D + 25 was as follows :

	<i>British Sector</i>	<i>American Sector</i>
D-Day	One ELS	Two ELS
D + 3	One RRS	
D + 4	Two RRS	Two RRS
D + 8	Five ALGs (incl improved RRS)	Five ALGs (incl improved RRS)
D + 14	Ten airfields	Eight airfields
D + 25	Fifteen airfields	Twelve airfields

To meet this requirement in the British sector, five airfield construction groups were phased in between D-Day and D + 3. The tasks and responsibility for construction were allotted as follows:

Site	Unit responsible for constr	Responsible to CE	Length of strip ft	Whether tracked or not	Time to be completed by	Type
B 1 ASNELLES 8785	16 Gp	30 Corps	1,800	No	D-Day	ELS
B 2 BAZENVILLE 8782	16 Gp	30 Corps	3,600	Yes	Midday D + 4 Last light D + 5	RRS ALG
B 3 STE CROIX 9383	24 Gp	30 Corps	3,600	Patched	Last light D + 2 Last light D + 4	RRS ALG
B 4 VILLONS LES BUISSONS 0075	25 Gp	1 Corps	3,600	No	Last light D + 6	ALG
B 5 LEFRESNE CalVILLY 9477	23 Gp	1 Corps	5,000	Yes	Last light D + 6	ALG
B 6 COULOMBS 8876	13 Gp	30 Corps	5,000	Yes	Last light D + 7	ALG

(II)

Summary of Events

In both the British and American sectors, construction was delayed by the tactical situation. The accumulative comparison between the plan and actual completion of airfields is shown below:

Day	British Sector		American Sector	
	Planned	Completed	Planned	Completed
D-Day	(pm) ELS		2 ELS	1 ELS
D + 1		ELS		
D + 2				2 ELS
D + 3	1 RRS (untracked)	1 RRS (untracked)	2 RRS (untracked)	
D + 4	2 RRS (1 tracked, 1 untracked)	2 RRS (untracked.)		2 RRS (untracked)
D + 6		2 RRS (1 untracked, 1 tracked)		
D + 7		2 ALGs		
D + 8	5 ALGs		5 ALGs	
D + 9		3 ALGs		
D + 10		4 ALGs		
D + 11		5 ALGs		
D + 12				4 ALGs
D + 14	10 airfds		8 airfds	
D + 16		6 airfds		
D + 17		7 airfds		
D + 18		8 airfds		
D + 19		9 airfds		
D + 21		10 airfds		
D + 23				6 airfds
D + 24				7 airfds
D + 25	15 airfds	10 airfds	12 airfds	8 airfds

The following is a summary of the progress made by each of the Airfield Construction Groups in the British sector

16 Airfield Constr Gp

A detachment landed on D-Day and prepared an ELS at ASNELLES which was in operation on D + 1. A reconnaissance was made on the site at BAZENVILLE and work began on a RRS on arrival of mechanical equipment. On D + 1, pockets of enemy resistance, which were mopped up by detachments from the Group, delayed work. A RRS, 3600 feet in length, untracked, was ready on D + 3. It was not occupied by RAF, and it was decided to extend to 5000 feet and track with SMT. This was completed and handed over to the RAF by midday D + 6, and completed as an ALG on D + 7.

24 Airfield Constr Gp

This Group was delayed in landing, and work was further delayed while detachments from the group cleared enemy defence posts and snipers from the site. Work was, however, begun at STE CROIX SUR MER on D + 1, and a 3,600 foot RRS was in use by the RAF on D + 4. A parallel strip, for tracking, was then started and completed as an ALG on D + 7.

13 Airfield Constr Gp

This Group was also delayed in landing and was landed in reverse order, the reconnaissance parties and the CRE being put ashore last. Work was not begun at COULOMBS until pm on D + 3 and was continued under shellfire. ALG was completed on D + 10.

23 Airfield Constr Gp

The site allotted to this Group at CAMILLY remained in enemy hands until D + 3, and the Group was landed late. Work was begun, under shellfire, on D + 4 and completed, including tracking, on the afternoon of D + 11.

25 Airfield Constr Gp

It was intended that this Group should construct the site at VILLONS LES BUISSONS. As this area remained in enemy hands, the Group was diverted to BENY SUR IVIER 9880 and began work late on D + 4. Work was completed p.m. D + 9.

COMMONWEALTH WAR GRAVES COMMISSION NOTES

- Founder was Fabian Ware, IWGC 21 May 2017.
- CWGC now looks after over 1.7 million graves in 23,000 locations in over 150 countries.
- Formed to commemorate the war dead of the Commonwealth in both World Wars.
- Dead buried where they fell with no favour.
- Member states – UK, NZ, AUS, IND, CAN, SA.
- Bayeux CWGC resting place of more than 4,100 Commonwealth servicemen also commemorates 1,800 service personnel with no known grave.

BRITISH NORMANDY MEMORIAL VERS-SUR-MER

- Completed 6 June 2021 on the 77th anniversary of D-Day.
- Officially opened 6 June 2022.
- Commemorates the 22,442 servicemen that died under British Command during the Battle of Normandy.
- Over 30 different nationalities represented.
- Union Flag from the air.
- Now one unified British Memorial in D-Day.
- Harry Billinge MBE died 5 April 2022 aged 96.
- Raised over £50,00 towards the cost of the Memorial.
- Landed on Gold Beach aged 18 years of age as a commando sapper attached to 44 Commando Royal Marines.
- He was just one of four men from his section of ten that survived the Normandy Campaign.
- Inspiration to his fellow veterans.
- British Normandy Memorial is run as a charitable trust and maintained by the CWGC.

ARROMANCHES D-DAY GARDEN

- D-Day 75 garden was first exhibited at the RHS Chelsea Flower Show in May 2019, then re-built in situ by 1 RSME Regt.
- Bill Pendell was chosen to represent the veterans although sadly he passed away in December 2018 aged 97. Bill landed on GOLD Beach aged 22 in 1944.
- At the entrance, a 97-year-old Bill looks at a sculpture of himself landing on D-Day.

US 2ND RANGER BATTALION ATTACK – POINTE-DU-HOC BATTERY

Location: Pointe-du-Hoc

The Germans were throwing grenades down the cliff – ‘potato mashers’. But we were close to the cliffs and took cover. Then we started up. There were no guns in the dome when we got there. We worked our way, crawling from one crater to another, and there was machine-gun fire from both ends of the cliff. We managed to get through the trenches, and we got into a position where some guns were placed under a tree. We destroyed them and a pile of ammunition. All the while there was shelling by 88s.

– Private First Class Salva Maimone
Company E, 2nd Ranger Battalion, Pointe-du-Hoc

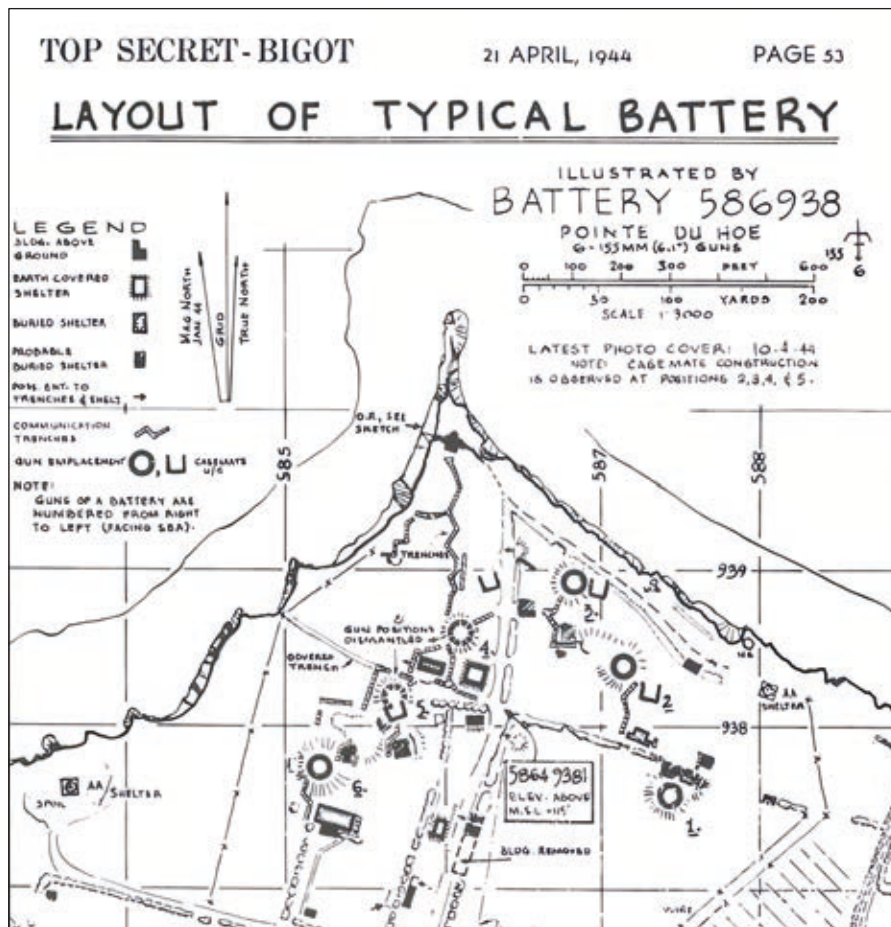
The Plan

At Pointe-du-Hoc, 4 miles west of OMAHA beach, the Germans had constructed a fortified position for a coastal battery of six 155 mm howitzers. Four of the guns were in open emplacements and two were casemated. With a range of 25,000 m the 155s could easily put fire onto the approaches to OMAHA beach and on the transport area of US V Corps. They could also reach the UTAH beach landing area. This

meant that the assaulting formations for both UTAH and OMAHA would have to be loaded onto their landing craft between 10–12 miles offshore – almost twice as far as the British and Canadian troops.

The battery was strongly protected from seaborne attack by sheer cliffs between 20–30 m high. Tunnels and protected walkways connected the gun emplacements and numerous trenches and machine-gun posts had been built around the perimeter fence and cliff edge. The German garrison numbered some 200 men of the 716th Coastal Defence Division, who were mostly non-Germans.

The mission to capture and neutralise the guns was given to Companies Dog, Easy, and Fox of Lieutenant Colonel



German defensive positions, Pointe-du-Hoc

James E Rudder's 2nd Ranger Battalion, some 225 men. The plan required the Companies to land by sea in British Landing Craft, Assault (LCA) at the foot of the cliffs, scale them using ropes, ladders, and grappling hooks, and then engage the enemy at the top of the cliff. Ten LCAs would land the Rangers, with two supply LCAs coming in a few minutes after the assault wave with backpacks, extra rations and ammunition, two 81 mm mortars, demolition charges, and equipment for hauling supplies up the cliff.



US Ranger shoulder flash

Once landed at H-Hour, the Rangers had until H+30 to complete their mission.

What Happened



2nd Rangers heading to their target in an LCA

The much-feared battery was bombed three times before D-Day and hit from the air again on the morning of 06 June. The battleships USS Texas and USS Arkansas also battered the area with their 14 and 12-inch guns just after dawn. Later in the morning, the destroyers USS Satterlee and HMS Talybont saturated the position with their 5-inch guns in direct support of the Ranger attack.

From the outset things went wrong. Eight miles offshore, one LCA with 20 men on board was swamped in the choppy seas and the men had to be rescued and carried back to England. Ten minutes later, one of the supply craft sank, with only one survivor. The other supply craft was soon in trouble and had to jettison most of the equipment for Companies Dog and Easy in order to stay afloat.

Although H-Hour was set for 0630 hours on 6 June 1944, navigational error and bad weather meant the Ranger force actually landed at 0710 hours. Despite the setbacks, within 30 minutes of landing 140 men had scaled the cliffs and the strongpoint had been successfully secured with relatively light casualties. However, upon reaching the fortifications, most of the Rangers learned for the first time that the emplacements were empty! The main objective of the assault, the artillery battery, had been moved out of position, possibly as a result of the air attacks during the build up to the invasion. The real guns had been replaced with wooden beams and camouflage nets to fool reconnaissance. Undeterred, the Rangers regrouped at the top of the cliffs, and a small patrol went off in search of the missing guns, which were duly located in a nearby orchard and destroyed by 0830 hours with thermite grenades.



Rangers begin the difficult climb



Scaling ladders at Pointe-du-Hoc

The costliest part of the battle for the Rangers came after the cliff assault. Up until that point, casualties had been about 30 to 40 men. Determined to hold the vital ground, yet isolated from other assault forces, they fended off several German counterattacks over the next two days, until reinforced from OMAHA beach. At the end of the two-day action, the landing force of 225 had been reduced to about 90 men who could still fight – a casualty rate of 60%.

The Site Today

Pointe-du-Hoc retains much of its battlefield character because of the destruction left by the bombs and shells unleashed by the Allies to neutralise this rocky point. The concentration of fire left craters and ruined casemates that the years have failed to erase. From the barbed-wire fence along the cliff top you can still look down the 30 m cliffs to the east beach where the three Companies of 2nd Ranger Battalion landed on D-Day and began their epic struggle.

US 16th Infantry Regimental Combat Team Assault – OMAHA Beach FOX GREEN Sector, Exit E-3 & Strongpoint WN62

⊕ **Location:** Colleville-sur-Mer

The landing craft were now coming on in waves. As boats approached, I concentrated on the ramps. As soon as they came down for the GIs to jump out, I began to fire. The GIs tried to find cover behind the beach obstacles that still towered above the waves, or corpses of their fallen comrades which were washing up and down. Often we could only see their heads and their helmets. After the landing craft had offloaded their living cargo, they withdrew. Until the next wave arrived, I fired at everything that moved in the water and on the beach.

– **Obergefreiter¹ Hein Severloh, 352nd Infantry Division, fighting from WN62² opposite FOX GREEN sector**

... the rest of the crew went to work on obstacles. In the first band, we saw ramps 10 feet high. It was necessary for one man to boost another on his shoulders to get the mine at the peak off. Men managed to bring up charges to blow a gap of about 30 m using a ring main with a 3-minute fuse. Fire was heavy – work was done spasmodically. As the men were taking off for the protection of the shingle pile, a mortar struck the detonating chord and set off the charges. Six Army members were killed and two wounded; also, four Navy killed and two wounded. A number of infantry killed and wounded. The explosion left few obstacles standing.

– **Staff Sergeant Bertram Husch
Gap Assault Team 12, Special Engineer Task Force, in front of WN62**

The Plan

The plan was to attack on a two-Regiment front: 16th Infantry Regimental Combat Team (16 Inf RCT) from US 1st Infantry Division on the left and 116th Infantry Regimental Combat Team (116 Inf RCT) from US 29th Infantry Division on the right. The beach was divided into sectors: EASY and FOX for 16 Inf RCT, DOG for 116 Inf RCT. CHARLIE sector was to be an alternative landing beach for the 5th Ranger Battalion held in reserve. At H-10 minutes, two Battalions of DD tanks were to wade ashore, followed at H-Hour (0630 hours) by two more. From H+1 minute, each RCT would land two Battalions on its frontage and secure an initial beachhead. At H+3 minutes, 16 Gap Assault Teams from the Special Engineer Task Force would arrive and clear 16 gaps in the beach obstacles, each 45 m wide, to allow follow-on landing craft free access to the beach. Each Team would consist of 1+30 men from a Combat Engineer Battalion and Naval Combat Demolition Unit, reinforced by a Sherman tank dozer.



The landing sectors on OMAHA beach, 6 June 1944.

¹ Corporal in the *Wehrmacht* (German Army).

² *Widerstandnest* 62 – literally, 'nest of resistance number 62'.

The beach approaches were to be clear by 0700 hours, with another wave of infantry scheduled to come ashore every 30 minutes thereafter. Enemy strongpoints were to be neutralised by 0830 hours.

What Happened

Launched nearly 6,000 m out and in rough seas, the majority of the DD tanks sank with only five of the planned 64 actually reaching the beaches. Strong winds and adverse currents also pushed a significant number of landing craft away from their designated targets into areas where commanding officers' maps were useless and supporting fires from friendly ships totally lacking. The beach designated FOX GREEN contained the beach exit E-3 and strongpoint WN62. It was along this sector of the beach that the majority of boat sections from Easy and Fox Companies from 16 Inf RCT landed. Casualties were heavy; after disembarking in the neck-deep water, one Section of Fox Company lost 17 of its 31 men trying to reach the shingle. Other Sections landing further east lost a third of their strength. Seven men reached the shingle from one boat. Only two of Fox Company's officers survived the landings.



Soldiers from 16 inf RCT wading ashore on EASY RED, 0739 hours 6 June 1944

Easy Company fared little better. Scattered along a half-mile of FOX GREEN sector, the boats came under fire as their ramps dropped. Many men were hit in the water; others tried to submerge themselves and drift in with the tide. Easy Company took most of its 105 casualties in the water or on the tidal flat leading to the shingle bank. Only Love Company, landing still further to the east on FOX RED, came ashore in a condition to fight up the bluffs.

Due to the offshore current and some bad navigation, four boat sections of Easy Company of the 116 Inf RCT also landed on FOX GREEN and were promptly shot to pieces by fire coming from WN62. Three of the Sections suffered over 30 casualties within a few minutes of disembarking. Some of the later Companies landing on EASY RED and FOX GREEN sectors took equally heavy casualties, but others, notably those of the 1st Battalion 16 Inf RCT, escaped the bloodbath.



Troops shelter from machine-gun fire, EASY RED.

By 0800 hours, the situation on the EASY RED and FOX GREEN sectors was critical. Naval gunfire had been lifted to avoid hitting the infantry as they moved towards the bluffs. Vehicles, now beginning to reach the beach in large numbers, were unable to cross the shingle bank and were rapidly being destroyed by German fire. Most of the infantrymen who had managed to cross the tidal flat lay huddled against the shingle, unable or unwilling to move. At this critical juncture, Colonel George A Taylor of 16 Inf RCT, landing at 0815 hours with the surviving half of his Command Group, put it this way: 'Two kinds of people are staying on this beach: the dead and those who are going to die

— now let's get the hell out of here'. Already, Sections of Easy and George Companies had begun to work their way to the top of the bluffs between the E-1 and E-3 draws. Taylor quickly followed, setting up his command post just under the top of the bluff. From there he continued to direct men inland. Just after 1000 hours the first elements of the follow-on 18 Inf RCT landed on EASY RED and by 1130 hours the E-1 draw was being opened by the various engineer units that had come ashore earlier.

At about this same time, further to the east, other bands of infantrymen were also penetrating German defences in the in the less heavily defended areas between the draws. By midday, it was becoming clear that the landing on OMAHA beach was not going to be defeated at the water's edge. However, the margin of victory was slim, provided by a few hundred courageous infantrymen, tank crews, and engineers.

There were many acts of bravery that day, none more so than by First Lieutenant Jimmie W Monteith, 16 Inf RCT who was awarded the Congressional Medal of Honour for his actions on 6 June 1944:



1Lt J W Monteith CMOH

For conspicuous gallantry and intrepidity above and beyond the call of duty on 6 June 1944, near Colleville-sur-Mer, France. 1Lt Monteith landed with the initial assault waves on the coast of France under heavy enemy fire. Without regard to his own personal safety, he continually moved up and down the beach reorganizing men for further assault. He then led the assault over a narrow protective ledge and across the flat, exposed terrain to the comparative safety of a cliff. Retracing his steps across the field to the beach, he moved over to where two tanks were buttoned up and blind under violent enemy artillery and machine-gun fire. Completely exposed to the intense fire, 1Lt Monteith led the tanks on foot through a minefield and into firing positions. Under his direction several enemy positions were destroyed. He then rejoined his company and under his leadership his men captured an advantageous position on the hill. Supervising the defence of his newly won position against repeated vicious counterattacks, he continued to ignore his own personal safety, repeatedly crossing the 200 or 300 yards of open terrain under heavy fire to strengthen links in his defensive chain. When the enemy succeeded in completely surrounding 1Lt Monteith and his unit and while leading the fight out of the situation, 1Lt Monteith was killed by enemy fire. The courage, gallantry, and intrepid leadership displayed by 1Lt Monteith is worthy of emulation.

Aftermath

The losses on OMAHA beach had been severe: 1,697 killed, wounded, or missing on the 16 Inf RCT sector and 1,799 casualties in the 116 Inf RCT beaches. Of the 16 Gap Assault Teams, only five gaps had been completed by 0700 hours, with a further four in place by the afternoon. Even this partial success had been costly, with the Special Engineer Task Force suffering 318 casualties – some of the highest of any unit on OMAHA that day.



16 Inf RCT wounded, FOX GREEN

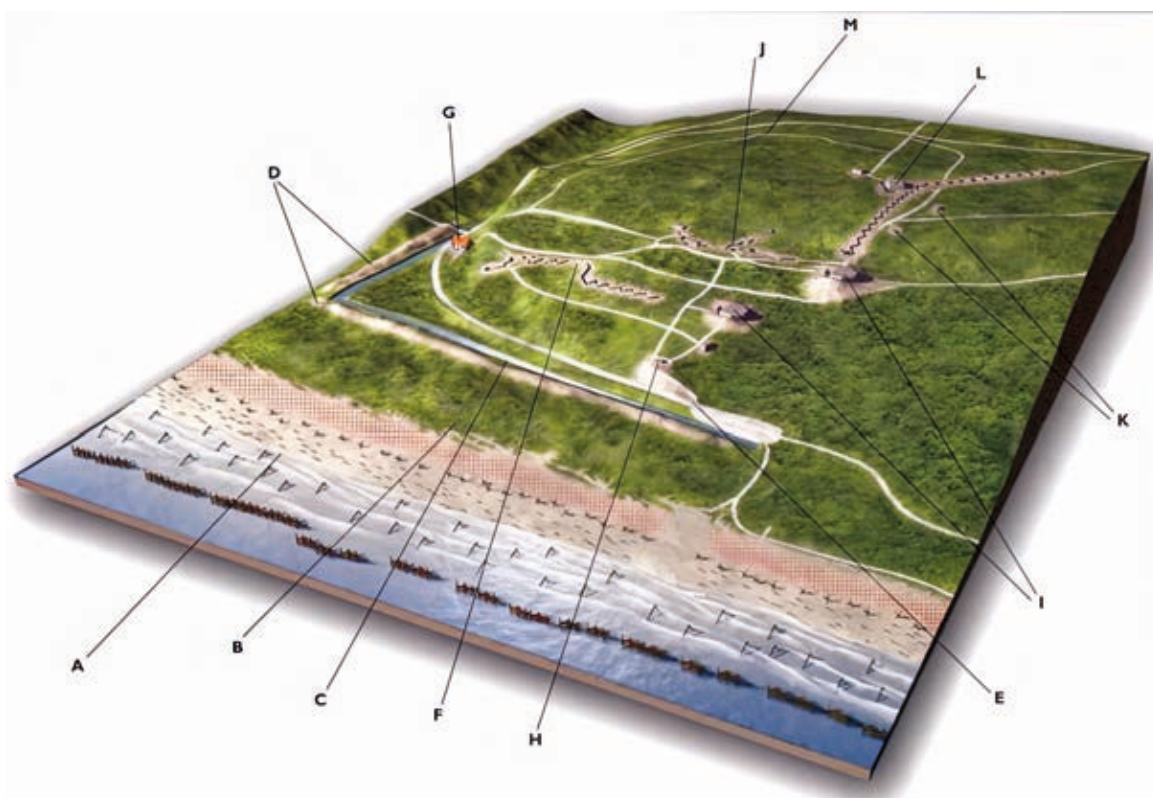


Half-drowned soldiers being pulled ashore on FOX GREEN

The Site Today

The area of strongpoint WN62 has recently been cleared and excavated so that it is now possible to visualise the powerful German defences that faced the first waves.

Located on the bluffs on the western shoulder of the E-3 exit, the position was roughly 250 m in diameter and 12 to 50 m in elevation over the beach below. The initial defences (A) featured layered beach



Plan of WN62 defences, OMAHA beach.

obstacles including Belgian gates, ramps with Teller mines, Czech hedgehogs, stakes and scattered anti-personnel mines. There was little cover for US assault troops until they reached the seawall (B), which was about 1.5 m high. The next obstacle was an anti-tank ditch (C) 1.5 m deep and 2 m wide, filled with water and covered by two static remotely operated flamethrowers (D). The strongpoint perimeter was ringed by barbed wire (E). There were four main concentrations of bunkers in WN62: at the north-eastern corner (F) was a cluster of field entrenchments to cover the anti-tank trap and the access into the Colleville draw. The main weapons here were a 50 mm gun and two machine-guns in trenches. To the east, an old villa (G) used as a canteen. In the northwest corner there was a Tobruk shelter (H) with a machine-gun guarding the access to the strongpoint and, further up the hill, two more 75 mm enfilade gun bunkers (I) that fired along Omaha Beach to the northwest. Midway up the bluff was the command centre (J), including the artillery observation and radio bunkers. This area was protected by three machine-guns in trenches and a pair of 50 mm mortar Tobruk shelters (K) to provide fire support for the forward positions. The final concentration of emplacements was on the crest of the bluff (L) and included a 20-man bunker for the garrison, another 50 mm mortar shelter and radio bunker. On the south-eastern side of the position was a single 50 mm gun in a field entrenchment (M) to cover the rear of the position.

Standing atop one of the German blockhouses is a monument commemorating the D-Day efforts of 5th Engineer Special Brigade. Elements of this unit, deploying from landing craft shortly after the first wave, cleared paths through the beach mines and obstacles. Under fire, they then used their bulldozers to cut a road up the west side of the E-3 draw. For its heroic efforts, the unit was awarded the French Croix de Guerre. Additionally, there is an imposing obelisk inscribed with the names of the men of the US 1st Infantry Division ('The Big Red One') who died on the beach below and during the advance inland (6 June – 24 July 1944).

NORMANDY AMERICAN CEMETERY & MEMORIAL

The Normandy American Cemetery & Memorial is located on the site of the temporary American St. Laurent Cemetery, established by the US First Army on 8 June 1944 and the first American cemetery on European soil in World War Two. The cemetery site, at the north end of its half mile access road, covers 172.5 acres and contains the graves of 9,387 American military dead, most of whom lost their lives in the D-Day landings and ensuing operations. On the Walls of the Missing, in a semicircular garden on the east side of the memorial, are inscribed 1,557 names. Rosettes mark the names of those since recovered and identified.



Normandy American Cemetery and Memorial Plan.

Individuals may also wish to identify graves of interest, namely:

- ✚ First Lieutenant J W Monteith Jr. CMOH (16th Infantry Regiment) (Plot I, Row 20, Grave 12).
- ✚ Brigadier General T Roosevelt Jr. CMOH (4th Infantry Division) (Plot D, Row 28, Grave 45). Son of the then President of the United States, 'Teddy' Roosevelt. He was awarded the Congressional Medal of Honour for his bravery at UTAH Beach on D-Day, but died of a heart attack in July 1944.
- ✚ Lieutenant Q Roosevelt (95th Aero Squadron, United States Army Air Service) (Plot D, Row 28, Grave 46). The brother of Brigadier General T Roosevelt Jr., he was killed in World War One.
- ✚ Colonel O W Reed Sr. (175th Infantry Regiment) (Plot E, Row 20, Grave 19). Died in Normandy on 30 July 1944.
- ✚ First Lieutenant O W Reed Jr. (363rd Infantry Regiment) (Plot E, Row 20, Grave 20). Died in Italy on 6 July 1944, he was the son of Colonel O W Reed.



Brig-Gen T Roosevelt Jr
CMOH



Lt Q Roosevelt



Col O W Reed Sr



1Lt O W Reed Jr



This Battlefield Tour has been organized by the Royal Engineers Historical Society (REHS), with the support of the Institution of Royal Engineers and led jointly by Major General Mungo Melvin and Colonel Don Bigger