

The Calgary Tanks at Dieppe

Hugh G. Henry

Since 1942 the Dieppe Raid has been the subject of much controversy and debate concerning its political and military background, aims, plans, execution and supposed "lessons learned." Although historians have documented their arguments well, they have not examined accurately or in any detail the operations of The Calgary Regiment (Tank), 14 Canadian Army Tank Regiment (14 CATR), Canadian Armoured Corps.¹ Some misunderstandings and myths concerning the tanks and men, their performance and conditions affecting their actions, must be dispelled. At this point it is worth noting that not only was 14 CATR the first Canadian armoured unit ever to go into action, it was the first time in history tanks were used in an amphibious landing, as well as the baptism of fire for the latest British equipment, such as the Tank Landing Craft (TLC), the new Churchill tank and its 6-pounder gun.

In early 1941 The Calgary Regiment (Tank) was mobilised as part of the newly formed 1 Canadian Army Tank Brigade (1 CATB) and after only a few months of extremely basic training, first with no vehicles or modern equipment and later with Great War vintage, American manufactured Renault tanks, the complete 1 CATB was sent overseas. It was to join the rest of the Canadian Army Overseas which formed the backbone of Great Britain's defence against the expected German invasion. During the remainder of the year, besides the normal training of driving and maintenance of tanks, wireless instruction, map-reading, range firing, reconnaissance and tactical training were carried out. In the Spring of 1942 several Canadian divisional and corps anti-invasion exercises, code-named *Beaver*, were carried out in the open country of Southern England. During *Beaver III*, 14 CATR performed

the most satisfactorily of all armoured units and therefore was chosen for the Dieppe operation.

In mid-May, 14 CATR moved to the Isle of Wight and undertook two months of experimental waterproofing of tanks that required much improvisation and testing, and practised loading and unloading tanks from the TLCs. Several amphibious exercises and two rehearsals on June 11-12 and 22-23, code-named *Yukon I* and *II*, in the area of West Bay and Bridport on the Dorset coast, were carried out with engineers and infantry of 2nd Canadian Division to give the tank crews experience in supporting other ground units assaulting a defended beach. Unfortunately none of the beaches had towns fronting them or the same stony beaches as at Dieppe. A typical exercise began by securing a beachhead, then moving a few miles inland over open country to capture an objective, such as an airport, and finally covering the withdrawal of the infantry to the beach before the tanks re-embarked themselves. The first exercise was a shambles, due mostly to naval errors, resulting in many units landing at the wrong beaches, late, or not at all. The TLCs themselves were over an hour late. The exercise showed the need for better liaison between all arms, improved wireless communication among all units, and more effective smoke cover from air and sea. *Yukon II* was more successful and therefore it was judged suitable to proceed with the raid, although naval units still had some navigational problems to work out. During these exercises 14 CATR never underwent street-fighting training with or without infantry, in any villages or towns. In the middle of August the regiment was ordered to prepare for another amphibious assault scheme. All tanks, vehicles, ammunition, and personnel were loaded on the TLCs at Gosport and Newhaven by August 18, at which time the men were informed that



Before-Above left: Tank training with chespaling. Beginning on 7 August 1942 at Seaford, Sussex, the Beach Track Laying Device, which enabled a tank to climb a wall up to 28" high, was developed, tested and approved a week later. For the raid the first tank on each of the six lead TLCs was to be fitted with it. Two days before the operation, five sets were completed and mounted while the sixth tank could not be fitted as it had a flamethrower. During transportation to the coast two sets were damaged and were removed so that only three tanks were so equipped for the raid. (Photo: Ed Bennett)

Above right: Tank landing exercise. During a June 1942 "Yukon" amphibious exercise, beach assault engineers practised laying chespaling tracks to give 14 CATR tanks and other vehicles traction over beaches of any composition. Of the 71 beach assault engineers who landed at Dieppe, only nine returned, of whom four were wounded. (NAC C138681)

the exercise would be an actual operation against Dieppe.

The plan originated in early April 1942 at Combined Operations Headquarters (COHQ), under the command of Vice-Admiral Lord Louis Mountbatten. It was part of a series of raids designed to gain experience in amphibious operations, and test new techniques and material, for the future invasion of the continent. At the time, capturing a port in usable condition was a fundamental and unchangeable determinate in all invasion planning. COHQ planners chose Dieppe in this context because they judged it had adequate defences to test a divisional-size assault while still being within the necessary range of fighter cover. The operation, code-named *Rutter*, originally scheduled for 20-21 June 1942, was postponed several times in early July and was indefinitely cancelled on 7 July due to unfavourable weather conditions.² The decision to revive the raid about a week later, redesignated *Jubilee*, and the exact status of its authorization continues to be controversial.³ A serious deficiency in the plan was the cancellation of a preliminary heavy naval and air bombardment and the lack of heavy naval support artillery.⁴

Instead, four *Hunt* class destroyers, with only 4.7-inch guns, were to briefly bombard, for about ten minutes, the buildings and frontal installations at Dieppe before switching their fire to the headlands on either side of the town where the Germans had emplaced heavy coastal guns. Similarly, Air Marshal Sir Charles Portal, Chief of the Air Staff, refused to risk losing bombers needed for the strategic bombing of Germany. So the heavy air bombardment component was dropped.⁵

An important consideration during the planning was where to land the tanks. Since all planners agreed that rivers had to be avoided, the tanks could only land between the mouths of the Scie and D'Arques rivers-this meant either at the beach at Dieppe or a small part of the beach at Pourville two miles to the west. In appreciation of the outline plan for *Jubilee* by 2nd Canadian Division, General Staff Officer 1, Lieutenant-Colonel C. Churchill Mann naively pointed out that tanks assaulting Dieppe could give immediate fire support to the attacking infantry and engineers and cause a psychological shock to the Germans and civilian population. Ammunition and engineer support material for tanks could

be supplied more easily on the main beach where the supply craft concentration point was. The tanks would also be closer to their planned objectives and the beach front was the most convenient place for re-embarkation after the raid.

Mann recognised the disadvantages of attacking the enemy frontally, the need for engineer assault teams, and the difficulty of penetrating blocked streets due to bombardment, but he pointed out that the garrison only consisted of two low-grade infantry companies. Opting in favour of the plan, he concluded that the tanks would play an important part in the withdrawal phase and that, in general, the tanks "seemed to have a reasonable prospect of success."⁶

The idea of sending a tank cavalry charge through the narrow streets of an enemy defended town, and out into the surrounding countryside, holding a defensive perimeter and then withdrawing through the town, all in the matter of five and a half hours, was ridiculously foolhardy and reckless. It also showed gross ignorance on

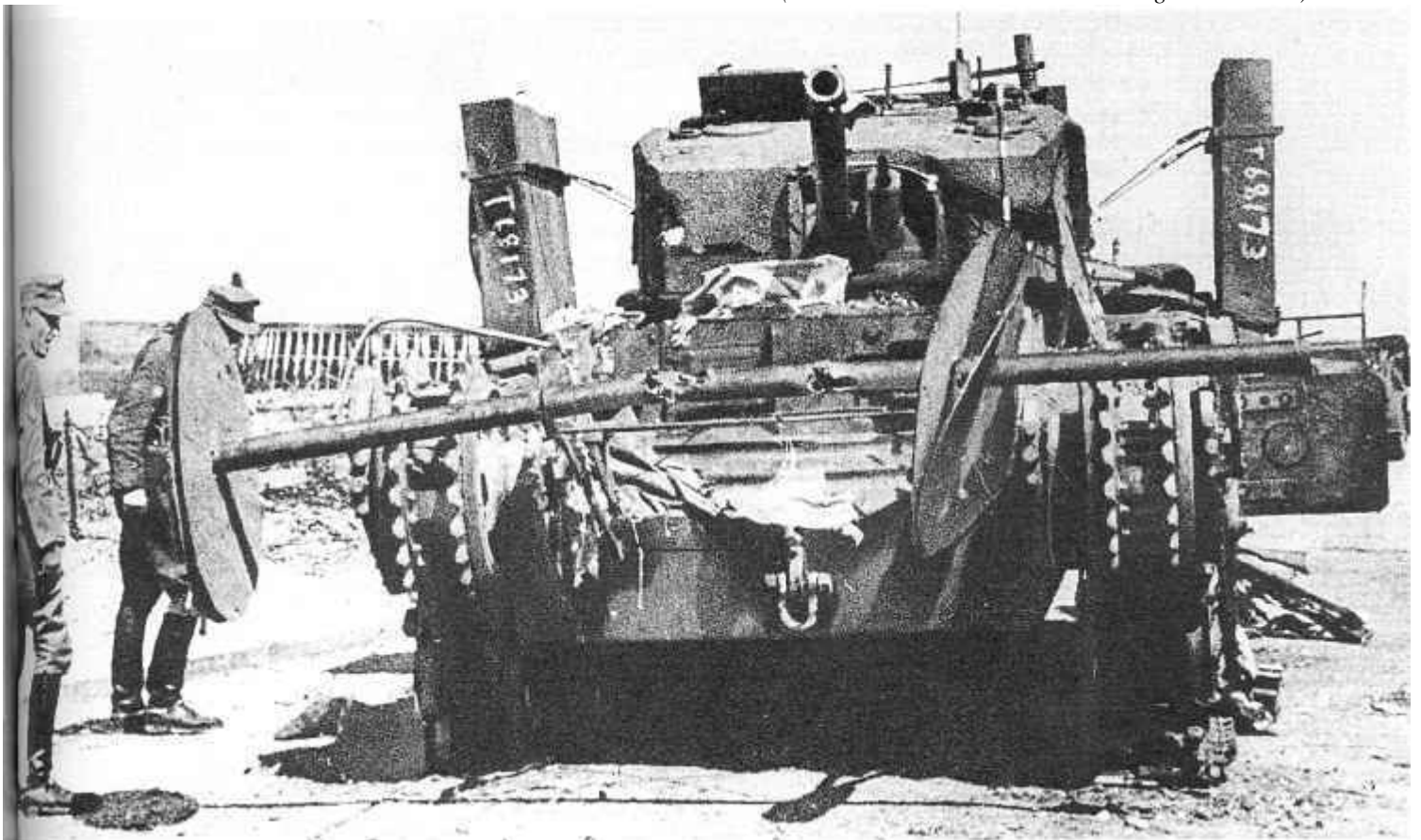
the part of COHQ planners and senior Allied commanders of the capabilities and limitations of tanks.⁷ No one seems to have considered the extreme vulnerability of tanks taking part in street-fighting in built-up areas. Vision from a tank is considerably impaired. If a crew commander stuck his head out of the turret to get a clear view, he was exposed to enemy sniper fire. Tanks could neither protect themselves nor return fire unless at some distance from the target because their guns could not be elevated very high. Since they depended on the infantry they also moved slowly.

The Assault Plan and Intelligence

The assault would be on a front of approximately ten miles at five different points. At 0450 hours precisely, after the short naval bombardment and air attack by cannon-equipped Hurricanes and Spitfires, the surprise flank attacks would go in, followed half an hour later by the main assault on the town. In all, 60 RAF squadrons were involved in the largest single air battle of the war over the Dieppe area.⁸

After-COUGAR, under command of 13 Troop Leader Thomas R. Cornett, successfully crossed the seawall at the eastern end of the beach using its chespalng device. Unable to adequately blow the wading extensions and track laying device, Cornett proceeded west, concentrating his 6-pounder fire on the tobacco factory. While maneuvering, COUGAR broke its left track due to the build up of rocks between the front bogey wheel and treads. The right track was soon blown by shellfire. The crew evacuated to the beach but not before burning out the interior with a sticky bomb, supplied for just such a purpose.

(Bundesarchiv-Militararchiv Freiburg RH 20-15/29)





During the battle an accurately sited German anti-tank gun and crew lie in wait near the end of the Rue de Sygogne for the possible penetration of any tanks. (Bundesarchiv 6112124-5)

On the flanks, Commandos would capture and destroy the coastal batteries about five miles east and west of Dieppe, while infantry were to neutralise coastal batteries on the east and west headlands which dominated the town.⁹ The Cameron Highlanders of Canada were to advance to meet the tanks of "A" and "B" Squadrons, 14 CATR, behind the town and then advance against another coastal battery, an emergency fighter airfield, and the local enemy divisional headquarters thought to be at Arques-la-Bataille. These flank attacks were an essential requirement for the success of the main frontal assault, half

an hour later, and to ensure the safety of the naval support vessels. They were, in general, a failure.

The main attack was *to* capture the town and hold it for a limited period while demolitions were carried out. The beach was divided, the eastern half (Red Beach) being invaded by the Essex Scottish Regiment, commanded by Lieutenant-Colonel Frederick K. Jasperson, while the western half (White Beach) was attacked by the Royal Hamilton Light Infantry, commanded by Lieutenant-Colonel Robert R. Labatt. Both regiments were to be supported by 58 tanks of 14 CATR, commanded by Lieutenant-Colonel



Late in the battle, on 19 August, German reinforcements climb over the metal gate blocking the Rue de Sygogne. This metal gate would not have presented a problem to a 40-ton Churchill tank. Note the 7" high and 4-5" wide reinforced concrete anti-tank wall. These extended across all the streets to the promenade with only a small gap to allow personnel to pass. They were surmounted by barbed wire and had a firing step behind for snipers. (Bundesarchiv 611/2122-16)

Johnny G. Andrews. Les Fusiliers Mont-Royal and "A" Commando of the Royal Marines were to be held in reserve.

In planning *Jubilee*, COHQ relied on imperfect intelligence. Sir F. H. Hinsley, the official historian of British intelligence during the Second World War, writes that COHQ planners were "over-reliant on one source" of intelligence, photo reconnaissance, and "took at face value" intelligence that underestimated the strength of the defences and the terrain.¹⁰ Shots taken from high elevations did not effectively show any defences hidden by building roofs or caves blasted into the cliffs of the headlands.¹¹

Given the limitations of photographic intelligence, it is regrettable that intelligence officers did not make a more careful evaluation of known defensive positions from the perspective of established German tactical doctrine. If COHQ had used its knowledge of the enemy order of battle and equipment in use, it could have made a more realistic and detailed evaluation of the defences on the beaches and in the cliffs. In actual fact, Dieppe had been turned into a fortress.¹² The defences were sited in an "anti-raid" role as opposed to an "anti-invasion" role meaning that

the majority of firepower was concentrated to cover the beaches.

The garrison consisted of two battalions and staff of the 571 Infantry Regiment amounting to approximately 1,500 men. The east and west headlands and cliffs contained numerous positions ideal for defence. Artillery, machine-gun nests, and dual-purpose flak-batteries were all sited to bring enfilade fire on the beach, while being cleverly hidden in depressions, caves and camouflaged bunkers. Allied Intelligence and COHQ planners underestimated the numbers and calibre of many of these guns.

The defences in the town itself consisted of 37 mm and 47 mm anti-tank guns, French 75 mm beach defence guns and heavy machine-guns hidden in buildings fronting the promenade. They could fire directly into approaching landing craft. The 1,500-yard promenade was interspersed with concrete pillboxes siting similar weapons. Many of these emplacements had connecting trenches to open weapon pits from which German soldiers could hurl grenades at the crouching troops beside the seawall. Finally, the Germans had mortars precisely ranged on the beach. Lieutenant-Colonel Labatt in an after-action report stated that, "stakes for ranging were still standing



BERT was immobilized on the promenade when shell fire broke its left track. After the battle it was repaired by German engineers and is seen here towing CHIEF off the beach. Bundesarchiv 291/1242-2A

on the beach from a mortar practice carried out the previous day. Their fire plan was well laid out and beautifully coordinated."¹³

The Chert Beach, Engineers and Tank Gadgets

A major intelligence blunder was the failure to identify the exact composition of the beach at Dieppe which proved to be the main technical difficulty for the tanks. The whole beach is composed of chert rocks which range from one to six inches in diameter. Stan A. Kanik, a former trooper of "A" Squadron who was on the raid but did not land, returned to Dieppe several times after the war, most recently in 1992. Drawing on his knowledge as a geological engineer his analysis of the beach clearly explains why many tanks had difficulty manoeuvring on the beach. He notes: "the white cliffs are composed of siliceous chalk, interspersed with chert lenses and beds." The chalk is easily dissolved and leaves behind the chert which under beach erosion is "shaped into rounded and oblong stones (rocks) that resist cracking or breaking." He continues, "The entire beach is composed of chert stones, boulders

and rubble," which after tidal action, "eventually rest at an "angle of repose" of about 15 to 20 degrees. Secondly, these rocks will extend many meters in depth, so vehicles cannot dig down to a solid rock base for traction. When a tracked or wheeled vehicle tries to climb up this slope, it immediately digs itself down; when the tracks are turned to either side the stones roll in between the drive sprocket and track and the object that first gives way is the pins holding the track links."¹⁴

All regimental and standard histories referring to Dieppe claim its beach is composed of "shale" or "pebbles." The Allies had carried out landing tests with the tanks on the firm, sandy beaches of the Isle of Wight and on the small, pebbly beaches of Dorset, but not on a chert beach, such as found at Dover. The Germans, who had many such trials, found their tanks became bellied down and stuck and did not site any heavy anti-tank guns or place anti-tank mines on the beach in front of the town since they thought the beaches were not negotiable by tanks.

COHQ planned for the Royal Canadian Engineers (RCE) to aid the tanks in surmounting

any obstacles. The RCE were divided into two main groups-the Beach Assault Party (under Major Bert Sucharov) and the Demolition Party (under Lieutenant-Colonel L. F. Barnes) and then subdivided into various sized detachments and squads depending on their tasks and distributed throughout the TLCs.

The Beach Assault Party was responsible for getting all troops, stores, tanks and other vehicles from the point of touchdown by the naval craft onto, across, and clear of the beach area. This meant clearing minefields, demolishing anti-tank concrete road blocks at the exits of the promenade and, using bulldozers to clear boulders, preparing ramps for evacuation and generally keep the beaches clear. If needed, these machines could also aid vehicles stuck on the beach and push off grounded landing craft. Ensuring that the tanks crossed over the beach and the seawall were the most important tasks of the Beach Assault Party. The plan was to have four-man squads, carried in the first six TLCs, run out ahead of the lead tanks to lay chespaling tracks, which were flexible rolls of chestnut fencing, "similar to wood-slat snow fencing but made with tough split-slats."

The bundles weighed about 250 pounds, were approximately 25 feet long and could be wired together to form a continuous track. These tracks could be moved around by the engineers to suit the later flights of incoming TLCs.¹⁵ All tanks, carriers and jeeps then passed over these tracks, only becoming bogged down if they swerved off them. Since many of the scout cars had experienced difficulty during training even on the chespaling, it was decided that during the operation these should be towed ashore by the tanks. Note that the pebbles on the Dorset beach are small, up to two inches in diameter, whereas at Dieppe they are up to six inches.

The seawall was estimated to be up to six feet in height. The *Rutter* plan of using sappers to blow gaps in the wall had been dropped in favour of building timber crib ramps beside it for the tanks to climb. Under favourable conditions a highly trained detachment of thirty engineers could carry the five tons of material necessary thirty yards and build a ramp beside a seven-foot wall in five minutes.¹⁶ Due to the intensity of German firing, no timbers were ever unloaded.

BERT & CHIEF shown on the promenade. Four types of Churchill tanks were used at Dieppe. The Mark I had a cast turret holding a 2-pounder and .303 Besa machine gun, and a 3-inch howitzer in the hull; the Mark II was the same except that a second Besa replaced the howitzer; the Mark II Oke was a Mark II with the Ronson flamethrower apparatus added; the Mark III had a welded turret holding the newly-developed 6-pounder gun, a Besa positioned to the left of it, and a Besa in the hull. (Bundesarchiv 291/1242-6)



Major Sucharov was assigned to develop a device to enable the tanks to get over the seawall. He came up with a carpet-laying device using chespaling. He designed an apparatus to hold one roll of chespaling, three feet wide (the width of one track was twenty-two inches) and about twenty-five to thirty feet long, in front of each track. Controlled electrically from the turret, the ends of the rolls could be released when the tank was the appropriate distance from the seawall. The rolls would then be gradually dragged under the tank's tracks. The tank could then mount up to a 28-inch wall without problem. After use, the whole apparatus could be jettisoned by an explosive charge, electrically set off from inside the turret. The device was demonstrated to Lieutenant-Colonel Andrews and approved by him on 14 August.¹⁷ Finally, the Beach Assault Party was responsible for preparing for the successful re-embarkation of all tanks and vehicles.

The Demolition Party was charged with demolishing power stations, petrol dumps, dockyard, dry-docks, swing bridges, gas works, pumping stations, telephone exchanges and rail facilities. The group was split up into many small squads, each with its own commanding officer, and assigned precise objectives to be sabotaged once the infantry and tanks secured a perimeter around the town. Most of these squads never got off the beach. Indeed, the engineers had about 85 to 90 per cent casualties—the highest rate in the raid.¹⁸

The tanks themselves had been adapted for amphibious operations up to a depth of six feet using rubber balloon fabric. Tall, box-shaped ducts (known as louvre extensions) were fitted to the air intake vents and the exhaust pipes were extended so as to be well above the water line. The waterproofing and the louvre extensions could be blown off by electrically-triggered cordite charges placed underneath them. The waterproofing procedure was still in the experimental stage and had never been tested under battle conditions.

These were the plans and preparations of COHQ and the regiments involved. No contingency plans for failure existed so success now depended on the individuals of the assaulting force.

The Attack Begins

Thirty minutes prior to the TLC's touchdown, the tanks were to start warming up their engines. Two types of TLC were used and could hold three or four tanks and one or two smaller vehicles. Radio silence was maintained until zero hour. The infantry were to land first, followed immediately by the TLCs carrying the engineers and tanks which would give immediate supporting fire. Charles P. Stacey, the official historian of the Canadian Army in the Second World War, points out: "In any opposed landing, the first minute or two after the craft touch down are of crucial importance; and it may be said that during that minute or two the Dieppe battle, on the main beaches, was lost. The impetus of the attack ebbed quickly away, and by the time the tanks arrived the psychological moment was past."¹⁹

The first wave of tanks of 14 CATR arrived about ten minutes late due to navigational error.²⁰ During this critical period, the infantry had no fire support and the German defenders were able to recover from the short preliminary air and naval bombardment and man their weapons. Thus, the assaulting infantry were caught trying to blast gaps in the unexpectedly strong rows of wire, the majority becoming pinned down at the seawall, unable to dig slit trenches in the rocks. The Essex Scottish tried three times to cross the promenade but were repulsed each time with heavy casualties. Thereafter, they could only return fire from the limited protection of the seawall. By about 0630 hours, only an hour or so after landing, they had suffered at least 75 per cent casualties.

On White Beach, the Royal Hamilton Light Infantry were initially held up by the strongly-fortified Casino. After stiff fighting, they cleared it despite many casualties. From the Casino they gave covering fire to some small groups attempting to penetrate the town. These units engaged in minor house-to-house and street fighting incidents with German patrols until they started to run out of ammunition. When they attempted to withdraw to the Casino, some were taken prisoner in the process. The infantry, initially pinned down behind the rows of barbed wire and seawall, were only able to pass these obstacles and later take the Casino after the first

flights of TLCs disembarked the supporting engineers and tanks.

Flight 1 and 1A consisted of six TLCs and landed between approximately 0525 and 0535 hours, five to fifteen minutes late, carrying a total of eighteen tanks. On touching down four of the TLCs were heavily shelled, becoming so badly damaged and killing the majority of the naval crews, that one was sunk and three were unable

where one was immobilised by the chert.²¹ The remaining 12 tanks never got off the beach; four had their tracks broken by shellfire, four by the chert and three most likely by the chert, although this is not certain. The last tank chose to stay on the beach and was mobile for the duration of the battle.²² The tanks on the promenade drove back and forth, unable to penetrate the town because of the huge concrete road blocks, on which the tanks' puny armour-piercing shells had no effect.



BEEBLE was the last of three Churchill Mark II Oke flamethrower tanks of 8 Troop, "B" Squadron to exit TLC-3, seen stranded in the background. Immediately after landing its right track broke while turning on the rocks forcing it to act as a stationary pillbox until the surrender. Note the armoured flamethrower fuel box at the back and the Ronson nozzle pointing up at the front. None of the flamethrowers were used during the raid. (ECPA DAA 281-3L8)

to withdraw, becoming stranded on the beach. Flight 2 of four TLCs carried a total of twelve tanks and beached on schedule at 0605 hours. All tanks disembarked except for one, unable to do so due to the intensity of fire. Although only one TLC was sunk, the others were so severely damaged that they had to be towed back to England.

Of the 29 tanks that attempted to land, two drowned and the rest made it to shore. Of these 27, 15 crossed the seawall, although 10 ultimately returned to the beach in the area of the Casino,

The engineers and sappers had suffered tremendous casualties and could not demolish these concrete barriers. The remaining two flights of TLCs carrying the whole of "A" Squadron and the remaining three troops of "C" Squadron, a total of 28 tanks, were never sent in. The two tank beach parties, instead of carrying out their planned initial tasks of directing the tanks to their objectives, spent most of their time in assisting wounded and organising tank cover for the general withdrawal.

At 1100 hours, the senior tank officer ashore, Major Allen Glenn, Officer Commanding "C" Squadron, ordered all remaining mobile tanks to withdraw to the beach and take up defensive positions to cover the withdrawing infantry. It seems that the Germans were preparing for an infantry counterattack which the tanks probably deterred. By noon all tanks had been immobilised, 14 with broken tracks, although many continued to fire until they ran out of ammunition. All 14 CATR veterans and Allied reports claim no tanks' armour was penetrated by anti-tank fire while crews were still in them, although German reports and a photo, reveal that two were penetrated.²³ This probably occurred after the crews evacuated and the Germans moved their anti-tank guns closer. Any casualties to 14 CATR personnel occurred outside the tanks. Contemporary reports that some tanks actually entered the back streets of the town are false.²⁴ The crews were ordered to evacuate at 1225 hours, whereupon they destroyed their tanks with the two "sticky bombs" provided for this purpose. Some crews were unable to do so because the blast would have endangered the many men who were by now using the tanks as cover. At 1300 hours, about the time of general surrender on Red and White beaches, General Roberts sent out the code-word VANCOUVER, the signal for the entire naval force to turn around and head back to port.²⁵

Conclusion

The raid failed because the *Jubilee* Plan was too inflexible, complicated and lacked essential heavy bombardment from sea and air. All units had precise objectives but there were no contingency plans. Another serious fault was the COHQ's neglect in using the air/ground cooperation and support structure available to it. The Army liaison officer attached to the Royal Air Force headquarters, Lieutenant-Colonel Charles Carrington, later wrote that there was "nothing to be learned from Dieppe, except how not to do it, a little late in the war to learn that lesson."²⁶ This remark is also correct in reference to the raid in general. Other obvious defects were an over-reliance on tactical surprise, which was not achieved, inadequate inter-service communications and supporting naval fire, and

a lack of intelligence on the defences.²⁷ One German report found it "astonishing" that the strength of the defences were underestimated since most of the details should have been obvious from aerial reconnaissance photos. Also surprising was the short duration expected to carry the operation out and the inflexibility of the plan. This report concluded that: "It is inconceivable why they did not support the battalions which landed near Pourville with tanks. An attack with tanks from Pourville against the hill west of Dieppe and against the "4 Ventés" Farm might have been successful, although it would have been most difficult to overcome the anti-tank walls, the pier and the Scie [River] dam."²⁸

From the point of view of 14 CATR, the major intelligence failure was not correctly identifying the geological nature of Dieppe's chert beach, which defeated at least six (probably nine) tanks, in other words, one-third of tanks ashore. Major Sucharov's beach track-laying device attached to some of the lead tanks had not, as many historians claim, been meant to aid the tanks over this hazardous obstacle. This is obvious since the length of chespalng carried was only slightly longer than the tank itself, whereas the beach was 30 to 50 yards wide depending on the tide. Instead, the device was designed to give a tank traction at the moment of crossing the two-foot-high seawall. Two of the three tanks carrying this device successfully used it as it was designed, although COUGAR, 13 Troop "C" Squadron, had problems jettisoning the apparatus which had either been damaged by enemy shellfire or was technically faulty.²⁹

The success of the experimental waterproofing and deep wading attachments on the tanks cannot be determined because almost all the TLCs landed dry and many tanks received damage to their exhaust and air intake louvres and waterproofing before and while exiting the TLCs, resulting in two drowning. Most of these problems were caused either by the tanks scraping against the sides of the TLCs or by enemy fire. At least one tank, BULL, 8 Troop "B" the Canadian War Museum the Canadian War Museum Squadron, had one of its louvres knocked off before disembarking, probably by the concussion of an exploding shell.³⁰ Some tank crews were unable, or only partially able, to blow the waterproofing and wading attachments,



Many high-ranking German officials and officers came to inspect the aftermath of the raid. Near Dieppe, Sepp Dietrich (left) and Albert Speer (right, facing camera) examine captured Churchills and observe firing tests. In the background is CAT, which was disabled on the promenade by a hit from a JU-87 Stuka dive bomber. (Bundesarchiv 291/1243-20

probably because the charges had been damaged by enemy fire. A few crews even had to manually cut this away, either because the partially blown fabric had jammed their turret traverse or obscured their vision ports. Proper testing of this equipment under actual fire, especially during disembarking training, would have revealed its vulnerability. No arrangement was made for shedding the exhaust extensions.³¹

The tanks were also severely undergunned. Eleven of the tanks had 2-pounders, which were like peashooters, while the other 18 had 6-pounders (approximately 55 mm calibre). Although the latter was the most modern British gun, it was still obsolete when compared with the German long-barrelled 75 mm turret gun in use at the time.³² The 6-pounder tanks did not even have high explosive shells since they were still in the development stage. Six-pounder turret jams were caused by shellfire hitting the turret ring. Some tanks had either their radio, electrical,

hydraulic or steering systems damaged by anti-tank and dive bomber hits. All these difficulties were technical problems that could have been foreseen with more testing, especially under actual fire. (The necessary firing tests were carried out *after* the operation.) The new 6-pounder gun also jammed on many occasions, even though it had been tested before the raid. The guns were test fired with only five or six rounds, due to the shortage of ammunition, and at a low rate of fire. During the battle crews obviously fired as quickly as possible. The high rate of fire was concluded as the reason for the jams and also revealed the tanks' normal stowage of ammunition was insufficient for an operation of this type.³³

A German military appreciation concerning the Churchill tank in the operation, and intended for internal distribution (as opposed to use for propaganda purposes) started by saying that the tank, "offers nothing worthy of consideration by technical personnel, nor has it any new constructive features either in the metallurgical field or in the field of weapon technology."

Squadron Sergeant-Major Gerry M. Menzies, crew commander of BERT, captured near where his tank was disabled. Note the Casino, the west headland and one of the many German slit trenches in the background. (Bundesarchiv Koblenz 61112124-14)



Commenting on their armament, the 3-inch howitzer and 2-pounder were considered obsolete, while the 6-pounder performance did not compare to the Russian equivalent. The armour thickness was considered good but of poor quality, compared to that used on German and Russian vehicles. The shape of the tank was considered outdated with the armour offering "a considerable angle of impact." The report concluded that the tracks were "made of very brittle material" of "clumsy design" and "fractured every time" they received a direct hit, which did not occur with German and Russian tracks. On testing the tanks it was found that the considerable track noise definitely inhibited the use of the wireless, to the point where the tanks had to stop to be able to hear radio transmitted speech. On the whole, the report gave the Churchill a very low rating, finishing, "in its present form, is easy to combat."³⁴

Concerning the other vehicles landed, at least two scout cars were rammed by their towing-tanks, probably because tank crews forgot about them in the excitement of battle and confusion caused by the unexpected fierce enemy resistance. Four others were towed ashore as planned but then became bogged down or were hit by shell-fire. One did make the promenade but, on returning to the beach, was disabled by a mortar bomb. Only one universal carrier and one jeep landed, both not moving off the beach. None of the bulldozers landed, although one was left in the back of the stranded *TLC-3*.³⁵

Although most of the technical problems of the tanks and other vehicles could have been avoided through more realistic testing and training, under simulated battle conditions using live ammunition, (14 CATR had less than two months of amphibious assault training before the raid), it probably would not have made much difference to the overall outcome of the battle.

The objectives and orders of 14 CATR in the raid showed the shattering ineptness of COHQ's tactical planning and the inadequacy of Allied armoured doctrine at this stage in the war. The futile decision to send tanks into a heavily fortified town was based on the outdated armoured tactics of the Great War.

To have planned a tank attack across a chert beach without trial on a similar beach, such as available at Dover, is, in afterthought, incomprehensible. Additionally, the idea of using tanks, with their very limited gun elevation and visual capabilities, to fight through a major built-up area, without considerable support, indicates gross ignorance or deliberate overlooking of the operational limitations of tanks. Only one sniper's bullet is necessary to kill a crew commander who tries to improve vision by putting his head outside the turret.

The plan is astonishing when it is recalled that 14 CATR had been trained for infantry support either in the open countryside or on the sandy beaches of the Isle of Wight. The regiment never had any training in the complex and dangerous type of close-quarter house-to-house fighting, necessitating extremely close infantry cooperation, that it would have encountered if its tanks had been able to penetrate the narrow streets.

Notwithstanding all of the foregoing comments, it is fitting to pay tribute to the courageous action of the Calgary Regiment's tank crews in providing covering fire to help the few infantry and other survivors to evacuate Dieppe beach. This effort explains why all except three of the men were taken prisoner. These valiant men fought until all their ammunition had been used up, by which time they had to choose between death, if they left the shelter of their tanks, or imprisonment if they stayed inside their tanks until taken prisoner. It was a painful yet obvious choice and a sad ending to one of the worst defeats in Canadian military history.

Notes

1. This article is based in part on the author's, *Dieppe Through The Lens of the German War Photographer* (London: Battle of Britain Prints International Ltd., 1993).
2. It has been suggested that the operation was cancelled because the assault craft crews were insufficiently trained. Their special amphibious training had been delayed due to the preoccupation of Force Commanders with changes in the overall plan. See John Hughes-Hallet, "The Mounting of Raids," *Royal United Services Institute Journal* 95 (November 1950): p.585.

3. Brian L. Villa, in his recent pioneering revisionist *Unauthorised Action: Mountbatten and the Dieppe Raid* (New York: Oxford University Press, 1989, revised 1994), contends that the conceited, overly-ambitious and too rapidly-promoted Mountbatten revived the raid without any formal or written authorization from his superiors. This premise explains why the date of its revival cannot be determined. He concludes, based largely on the lack of supporting documentary evidence authorising the raid by the Chiefs of Staff Committee, that Mountbatten was able to do so due to the silent acquiescence of both Churchill and the British Chiefs of Staff and a certain amount of collusion with a few key British and Canadian military figures. See Chapter 11, especially pp.237-239. A defence of Mountbatten's position is in Phillip Ziegler, *Mountbatten: The Official Biography* (London: Collins, 1985), pp.188-190. For support of the argument attempting to explain the task of authorization see C.P. Stacey, *Six Years of War* (Ottawa: Queen's Printer, 1955), p.341; S.W. Roskill, *The War At Sea, 1939-1945*, Vol.2 (London: HMSO, 1956), p.243; and James Leasor, *Green Beach* (London: Heineman, 1975), p.75.
4. The Royal Navy did not want to expose its large battleships to the risk of enemy air and U-Boat attack. Roskill, *The War at Sea*, pp. 129-130.
5. Brigadier C.C. Mann, "Lecture notes on Combined Services Raid on Dieppe, 19 August 1942, September 1942," p.2, Record Group (RG) 24, Vol.10871, File 232C2(D26), National Archives of Canada (NAC). Moreover, night bombing was too imprecise and day bombing would have to be carried out previous to the raid, thereby alerting the Germans. The planners also worried that any heavy bombardment would block streets with rubble and cause many fires, which would impede the engineers' demolition tasks and the tanks trying to proceed through the town. The effect on the local French population was also considered but this was not a major element in the bombardment's cancellation.
6. Lieutenant-Colonel C.C. Mann, "Observations Upon the Outline Plan," pp.3-4, RG24, Vol.10872, File 232C2(D36), NAC.
7. In this period, astonishing as it may seem, no clear and established tactical doctrine for the employment of tanks existed in the British Army. The pre-war doctrines had been proved disastrously imperfect during the campaign preceding Dunkirk. The British High Command had not collectively decided on the type of tank to be produced and how it was to be employed mainly because during the interwar period British senior officers, schooled in the traditions of the infantry or cavalry arms, were unwilling to recognise that the gradual mechanisation of the cavalry arm, in turn necessitated a radical revision of the cavalry's traditional roles. Lieutenant-General E.L.M. Burns, *General Mud: Memoirs of Two World Wars* (Toronto: Clarke, Irwin, 1970), pp.110-111.
8. For more on the air battle see Norman Franks, *The Greatest Air Battle: Dieppe, 19 August, 1942* (London: W. Kimber, 1979).
9. The Rutter plan had envisaged using airborne forces. COHQ apologists say that the airborne element was replaced because it was necessary to have clouds at a certain height if paratroops were to drop accurately and effectively and such weather conditions might not coincide with the amphibious assault. The true reason is that Air Marshal Sir Arthur Harris, Chief of Bomber Command, did not want to risk losing his valuable bombers on 'side-shows'. Villa, *Unauthorised Action*, p. 151 and Leasor, *Green Beach*, p.75.
10. Sir F.H. Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations*, Vol.2 (London: HMSO, 1981), p.699. COHQ had also expected the beaches to be mined when in fact they were not. S.R. Elliot, *Scarlet to Green: A History of Intelligence in the Canadian Army, 1903-1963*, (Toronto: Canadian Intelligence and Security Association, 1981), p.172.
11. Elliot, *Scarlet to Green*, p. 163
12. Elliot, *Scarlet to Green*, p. 174.
13. For a detailed summary of German defences see Major-General J.H. Roberts, "Report by the Military Force Commander-Operation Jubilee, 27 August 1942," p.4, RG24, Vol.10870, File 232C2(D2), NAC; Lieutenant-Colonel R.R. Labatt, "Narrative of Experiences at Dieppe," p. 10, RG24, Vol.10873, File 232C2(D62), NAC.
14. S.A. Kanik, "Chert Beach— Alias Dieppe," *The Informal History of The Calgary Regiment— 14th Canadian Armoured Regiment*, eds. Lieutenant-Colonel R.G. Maltby and Major W.R. "Jesse" James (Vancouver: 50/14 Veterans Association, Calgary, 1989), Chapter 2, p. I. See also E.L. Waldo Smith, *What Time the Tempest* (Toronto: Ryerson, 1953), p.75.
15. Major Bert Sucharov, "Report of the training carried out by the Engineer Group from 2 Canadian Division during the exercises RUTTER and JUBILEE, 20 August 1942," to Chief Engineer, 1 Canadian Corps, p.6 and Appendix II, File 594.019(D8), Directorate of History, National Defence HQ (DHist), Ottawa.
16. Major Bert Sucharov, "Report of the training carried out by the Engineer Group from 2 Canadian Division during the exercises RUTTER and JUBILEE, 20 August 1942," to Chief Engineer, 1 Canadian Corps, p.10 File 594.019(D8), DHist.
17. A.J. Kerry and WA. McDill, *The History of the Corps of the Royal Canadian Engineers*, Vol.2, 1936-1946 (Ottawa: Military Engineers Association of Canada, 1966), p.99. For a detailed description of the beach track laying device see Major Bert Sucharov, "Report of the training carried out by the Engineer Group from 2 Canadian Division during the exercises RUTTER and JUBILEE, 20 August 1942," to Chief Engineer, 1 Canadian Corps, Appendix III File 594.019(D8), DHist.
18. Kerry, *Royal Canadian Engineers*, pp. 108-109 shows a breakdown of the types of casualties; as does Brigadier Churchill C. Mann, "General Operational Questions and Answers— Operation Jubilee, 18 October 1942," p.4, RG 24, Vol. 10870, File 231C2(D2), NAC.
19. Stacey, *Six Years of War*, p.375.
20. Stacey, *Six Years of War*, p.375.
21. Fifteen tanks across the wall is the standard figure quoted, see Stacey, *Six Years of War*, p.379; this is confirmed by the German document, "Report of the German C-in-C West on the Dieppe Raid, 19 August 1942," 3 September 1942, p.22 (Translated by Historical Section, CMHQ, Ottawa, November 1946), RG24, Vol.20429, File 981.013 (D6), NAC; air reconnaissance on 20 and 21 August revealed tank tracks crossing the seawall at eight places, Memorandum of interview of Major Tweedsmuir by Major J.D. Halbert, G.S.O.2, CMHg, 27 August 1942, File 5025, The Tank Museum, Bovington, United Kingdom.

22. The crew commander, Major Allen Glenn, Officer Commanding "C" Squadron and the senior tank officer ashore, chose to do this as the ridge on the beach was the best place for command and control, since he could see both flanks of the beach and promenade clearly. Letter to author, 17 January 1991.
23. "Report by Lieutenant-Colonel G.C. Reeves on the Raid Carried Out on Dieppe on 19 August 1942," Assistant Director of Tank Design (ADTD), 28 August 1942, p.3 DEFE 2/344, Public Record Office (PRO), London; 81 Army Corps HQ, Operations Officer, "Combat report and experiences gained during the British Attack on Dieppe 19 August 1942," 25 August 1942, p.14, RG24, Vol.20438, File 981.023(D10), NAC; Military Intelligence Section 10, "Translation of Consolidated Order No. 15, 18 September 1942. Principal comments of the C-in-C Army Group West", 14 December 1942, p.2 File 5024, The Tank Museum, Bovington, states that "two tanks had been penetrated by something between 37mm and 50mm calibre." [Most likely by 47mm].
24. For reports that tanks entered town see Jacques Mordal, *Dieppe: the Dawn of Decision* (London: NEL, 1981, first published 1963), p.203; Kerry, *Royal Canadian Engineers*, p. 107; a report to the contrary is in Buckley, *Norway. The Commandos. Dieppe* (London; HMSO, 1951), p.258.
25. See Headquarters 4 Canadian Infantry Brigade, "Intelligence Log— Intercepted Message, 19 August 1942," p.5, RG24, Vol.10873, File 232C2(D53), NAC. Of the 32 officers and 392 other ranks (ORs) of 14 CATR embarked in England, 17 officers and 154 ORs landed; of these 2 officers and 10 ORs were killed, 3 ORs were evacuated, 15 officers and 142 ORs were taken prisoner, some of them wounded, while 15 officers and 241 ORs of "A" Squadron, the three Fighting troops of "C" Squadron and those remaining from "B" Squadron were ordered to return to England. The three men who landed and were evacuated as wounded and were Trooper George Volk of 9 Troop, "B" Squadron from BLUEBELL, Trooper Percy W. Aide of 8 Troop, "B" Squadron from BULL, and Lance-Corporal Frank Howe of Regimental Headquarters, the driver of scout car HOUND. See "Part II Order 52, 4 September 1942, for 14 CATR" issued by Canadian Section, General Headquarters, 2 Echelon, King's Own Calgary Regiment Archives; and "14th Canadian Army Tank Regiment Personnel Returns from Dieppe," memorandum, 10 September 1952, File 594.065(D7), DHist.
26. Charles Carrington, *Soldier at Bomber Command* (London: Leo Cooper, 1987) p. 105.
27. "A Military Intelligence Section 10 appreciation," dated 16 January 1943, of a "lessons learnt" report states that, "there is little [?] NEW to be learnt from DIEPPE. It emphasises many points which really are as old as the hills. Most of the points apply just as strongly to land warfare, but do we fully appreciate them." File 5024, The Tank Museum, Bovington.
28. 81 Army Corps HQ, Operations Officer, "Combat report and experiences gained during the British Attack on Dieppe 19 August 1942," 25 August 1942, pp. 11-12, RG24, Vol.20438, File 981,023 (D10), NAC.
29. "Report by Lieutenant-Colonel G.C. Reeves on the Raid Carried Out on Dieppe on 19 August 1942," Assistant Director of Tank Design, 28 August 1942, p.2, DEFE 2/334, PRO.
30. "Report by Lieutenant-Colonel G.C. Reeves on the Raid Carried Out on Dieppe on 19 August 1942," Assistant Director of Tank Design (ADTD), 28 August 1942, p.4, DEFE 2/334, PRO; an air louvre of BULL can be clearly seen in the photo of the stranded TLC-3, DAM 1141 L09, ECPA [French Military Photo Archives], Paris, France.
31. Director Mechanical Engineering, "Lessons of the Dieppe Raid - 19 August 1942," 18 September 1942, File 5608, The Tank Museum, Bovington; Henry, *Dieppe Through The Lens*, pp.21, 39, 49.
32. George Forty, *German Tanks of World War II "In Action."* (New York: Blandford Press, 1987), pp.80-81.
33. "Report by Lieutenant-Colonel G.C. Reeves on the Raid Carried Out on Dieppe on 19 August 1942," Assistant Director of Tank Design, 28 August 1942, pp.3-5, DEFE 2/334, PRO. All tanks were supplied with an extra box of Besa ammunition.
34. Military Intelligence Section 10, "Translation of Consolidated Order No. 15 dated 18 September 1942. Principal comments of the C-in-C Army Group West," p. 1, File 5024, The Tank Museum, Bovington.
35. Photo of interior of TLC-3, DAM 1141 L09, ECPA.

Hugh Henry is completing his Ph.D on the planning, intelligence and execution of the 1942 Dieppe Raid at St. John's College, University of Cambridge. He received his BA and MA in history, specialising in military and strategic studies, from the University of Victoria. This article is extracted in part from his book, *Dieppe Through The Lens Of The German War Photographer* (1993).