

NOTRE DAME COLLEGE

# Operation Fortitude South

---

HI 450 - Senior Research Project

Clayton Ousley

4/26/2012

Based upon individual interests and needs, graduating seniors majoring in History are required to complete a senior research seminar. In doing so, students must develop a research project to demonstrate their progress in research methodology. As my studies in History give particular emphasis towards Intelligence Studies, my project must focus on some aspect of historical intelligence. In fulfillment of these requirements, I present my report on Operation Fortitude-South, the Allied deception program that was designed to secure the amphibious assault on France: D-Day, 6 June, 1944.

Clayton,

I just finished reading your D-Day paper - this is one of the best senior papers I've ever received. Your A for the paper is very well deserved, and I'm pleased to see how much effort you put into this project.

Dr. Moore

Gregory Moore, Ph.D  
Chair,  
Department of History & Political Science  
Director,  
Center for Intelligence Studies  
Notre Dame College  
4545 College Road  
South Euclid, Ohio 44121

## Introduction

6 June, 1944 holds the record of hosting the “greatest amphibious invasion in history,”<sup>i</sup> massing a force of 2 million men<sup>ii</sup> to assault and capture the fifty-mile Normandy coastline<sup>iii</sup> of German occupied France. In total, around 156,000 troops landed in the first 24 hours (by both land and sea), supported by 6000 ships and landing craft (manned by an additional 196,000 men),<sup>iv</sup> and over 11,000 aircraft.<sup>1 v vi</sup>

The numbers are staggering, even among the estimates. What is even more impressive is how they managed to move all this without arousing suspicion. To be able to transport this much equipment and personnel 100 miles away from known British ports, concentrated into only a 30- mile-wide area without being detected is still a marvel to this day. Just as impressive are the methods used to deceive the German High Command and redirect their attention away from the Normandy landings, and delay as long as possible any reinforcements afterwards. On this subject, British Prime Minister Winston Churchill is quoted to have said “Truth is so precious that she should always be attended by a bodyguard of lies.”<sup>vii</sup> It is from this necessity to hide the truth of where, when, and how the Allied Invasion of Europe would occur that “Operation Bodyguard,” as well as its various sub-plans, were born.<sup>viii</sup> Of particular interest is the creation of the sub-plan “Operation Fortitude-South,” which will be the focus of my research and devotion here.

---

<sup>1</sup> Specific totals vary by source. Other estimates set troop strengths as high as 185,000 for sea-born and 18,000 for airborne (Don McCombs and Fred L. Worth, “D-Day,” in “World War II: 4,139 Strange and Fascinating Facts,” (New York: Wings Books, 1996), p. 136). Some Naval strengths vary from 5,333 ships (Source: Stephen E. Ambrose, “D-Day,” (New York: Simon and Schuster, Inc.1994) p. 25) to 6939 ships (Source: The D-Day Museum, “Frequently Asked Questions for D-Day and the Battle of Normandy,” <<http://www.ddaymuseum.co.uk/faq.htm> > (3 February 2012).)

## Pre-Planning Discussion

The thought of a cross-Channel invasion into Europe to defeat the Nazis was an ongoing topic among the Allies, long before the actual plans were set. On 19 July, 1941, shortly after the German blitzkrieg was unleashed upon the Soviet Union, Josef Stalin began his pleas for an opening of a second, “western” front. In response, the British made it clear that another European front could not be afforded in 1941.<sup>ix</sup> Impossible as it might have been, Churchill knew that the second front could not be avoided. In October of that year, in a conversation held with the Head of Combined Operations Captain Lord Louis Mountbatten, Churchill spoke of its inevitability. He said, “You are about to prepare for the invasion of Europe, for unless we can go on land and fight Hitler and beat his forces on land, we shall never win this war.”<sup>x</sup>

This option remained on the table into 1942. Roosevelt and Churchill continued the debate over whether a cross-Channel assault was most prudent, but Churchill was less convinced. Churchill favored invading North Africa and postponing a strike on France. Regardless, Operation Sledgehammer was drawn up for the fall of 1942.<sup>xi</sup> Its purpose was to secure a small section of French beachhead and draw attention away from the Soviet eastern front.<sup>xii</sup> However, all plans were cancelled by August following the disastrous raid on the French port of Dieppe.<sup>xiii</sup>

On 19 August, in a joint-operation between Canada and Great Britain, a cross-Channel raid was conducted on Port Dieppe,<sup>xiv</sup> for objectives that today are still uncertain. Reasons vary from testing German resistance and evaluating Allied invasion techniques<sup>xv</sup> to the belief that controlling a port on the French coast would facilitate future landings (Operation Sledgehammer comes to mind).<sup>xvi</sup> This operation ended in failure, with casualties no less than tragic. The Royal Canadian Army Medical Corps (R.C.A.M.C.) Section of Anaesthetics [sic] released this report about those who survived the raid to receive treatment:

“Of the casualties brought in, 65% were found to be in need of immediate surgery requiring anaesthesia [sic]. Of the remainder, several were considered hopeless and the balance not urgent. Multiple wounds were the rule rather than the exception, and were caused by bomb or shell fragments, and also by repeated woundings. The different hospitals reported that from 50% to 100% of their cases suffered from multiple wounds; average incidence approximately 62%.”<sup>xvii</sup>

With these statistics, Churchill’s reservations about opening a second front through France were confirmed. The planning for Operation Torch went ahead, with landings in North Africa beginning in November.<sup>xviii</sup>

## Green Light and Opening Ideas

It wasn’t until the Casablanca Conference in January 1943 that the cross-Channel invasion idea was again given full attention. Even though Churchill and Roosevelt agreed that invading Sicily in 1943 showed more promise than invading France in 1943,<sup>xix</sup> they still believed that a major Allied offensive in France deserved attention.<sup>xx</sup> Four months later at the Trident Conference, Churchill and Roosevelt agreed to set May of 1944 as the date of the Normandy invasion.<sup>xxi</sup> In April 1943, the Combined Chiefs of Staff commissioned Lieutenant General Sir Frederick Morgan as Chief of Staff to the Supreme Allied Command designate (COSSAC),<sup>2</sup> giving him orders to prepare the first plans for the Overlord Invasion.<sup>xxii</sup> While Operation Husky was succeeding in capturing Sicily<sup>xxiii</sup> and the invasion of Italy was beginning with Operation Baytown,<sup>xxiv</sup> Anglo-American planners were preparing a strategy for an assault on France.<sup>xxv</sup>

The Combined Chiefs of Staff received the Overlord proposal in July, after which Lieutenant General Morgan began his work on a deception plan. From the beginning there were conflicting ideas on

---

<sup>2</sup> Designed in the Casablanca Conference, COSSAC was set up by the United States and Great Britain to decide the proper course for a cross-channel invasion into Europe

how the deception should be executed. From the outset it was obvious that the operation would have to consider many different factors before a successful plan could be set. The deception planners needed to accommodate specific security needs to protect their activities. Designers needed to prevent troops from leaking secret information after their final briefings, as well as prevent unauthorized access to restricted areas involved in the operation. Colonel John Bevan of the London Controlling Section (LCS)<sup>3</sup> prioritized taking care of closing of “frontier areas” over stopping leakage from allied troops. Bevan argued an untimely shutdown of military areas could signal an impending invasion sooner than a few loose lips. Morgan began looking over Bevan’s plan after it was received on 14 July, after which he voiced his disagreement. Though his objections against Bevan’s plans included legitimate concerns, Morgan’s own plan was too unrealistic. What was accepted by all was that D-Day would require massive concentrations of troops and military equipment, which would be impossible to conceal until D-Day. Thus, the most secure diversion plan would revolve around suggesting at least one additional assault.<sup>xxvi</sup>

Many shared Morgan’s esteem for the German Intelligence Service (known as the Abwehr<sup>xxvii</sup>), and that an effective deception against the Germans would be three-fold in scope. It must include intelligence, aerial reconnaissance, and spies.<sup>xxviii</sup> Sir Ronald Wingate, the Deputy Director of the LCS,<sup>xxix</sup> noted the challenge such an extensive operation would pose, because in order for it to succeed an extensive visual element would have to be employed, despite that Operation Overlord would hold priority over all resources. The actual invasion would get first call over any personnel, arms, supplies, and military equipment, so any sharing of physical resources between operations would need careful coordination. Although many shared in the high opinion of the German Intelligence, many still disagreed in how the strategic deception policy should play out. It wasn’t until the Tehran Conference that Allied leaders came to agree on an overall strategic deception policy to cover for Operation Overlord.<sup>xxx</sup>

---

<sup>3</sup> The London Controlling Section was a British military deception agency headed by Colonel Bevan

## Bevan and Plan Jael

Before this date, there were two deception plans, Bevan's "Jael" and Morgan's "Torrent" (also known as 'Appendix Y'). Bevan's plan "Jael" was submitted to Morgan on 8 October, 1943.<sup>xxxix</sup> The whole focus of the plan was to convince the Nazis that the cross-Channel assault into France had been abandoned. Instead, Germans should divert their attention to the Mediterranean and make preparation for an assault on the Balkans. When Germany effectively diverted its attention away from France, the heightened aerial bombardment would cripple Germany, preparing for the final surprise invasion through northwest Europe.<sup>xxxix</sup> The plan had its weaknesses, which Bevan did not deny: the D-Day preparations in England could not be kept secret from the Nazis just by pointing their attention somewhere else. The Allies had German aerial reconnaissance to contend with, and masking the Supreme Allied Commander's shifting interests from the Mediterranean to northern Europe proved too cumbersome to win final approval.<sup>xxxix</sup>

Morgan, opposing Operation Jael, created "Plan Torrent," later known as "Appendix Y." Working with Brigadier Dudley Clarke (the leader of the "A" Force<sup>4</sup>), Morgan edited it into completion.<sup>xxxix</sup> It underwent seven revisions before it reaching its final form, of which a detailed description can be found in the following section.

## Morgan and Appendix Y

Unlike Jael, Appendix Y targeted a local site to divert German attention to. It focused specifically on making the Germans think the main assault would strike no further west than Calais. Therefore, the majority of all air and ground forces (as well as fortifications) should be concentrated by the Pas de

---

<sup>4</sup> The 'A' Force was an intelligence organization for the British Military. It oversaw the espionage and deception operations in the Mediterranean and the Middle East.

Calais, and be kept there for at least D plus 14 (14 days after D-Day). Morgan also thought that the enemy be kept in the dark about the invasion's scheduled date and time.<sup>xxxv</sup>

Morgan designed Appendix Y so that both Overlord and its corresponding cover plan could function under identical command structures. Appendix Y was divided into three phases: the preliminary phase, the preparatory phase, and the post-assault phase.<sup>xxxvi</sup> The first, preliminary phase was set to commence after Appendix Y's approval, and would cover the training of a dummy assault force and its preparation for being relocated in southeast England. Its goal was to feed the Germans the story that the invasion force waited across the Straits of Dover, with all sights set on Calais. At the time, Overlord plans called for five infantry divisions to bear the true assault – three for the main assault and two for the follow-up. Morgan requested the addition of two more divisions to pose this threat on Calais. These divisions would be fictitious and would pose no real threat. They would, however, give the impression that the Allies could pose one more main and follow-up assault, with all emphasis on Calais.<sup>xxxvii</sup>

To accomplish this, an imaginary assault force had to be created, undergo fictitious training exercises, be relocated into position, and begin preparations for the eventual assault on France. Marking the existence of such a force required more visual elements than were available, so the use of dummy landing craft and fabricated wireless traffic was an irreplaceable element of the plan. For the mock division's training, the Moray Firth was chosen to be the ideal site. Located in Northeastern Scotland, it was also the chosen location for real 3<sup>rd</sup> British Infantry Division and its corresponding naval group, the 'S' Force. The fictitious follow-up division was given the Scottish town of Rosyth for its training purposes.<sup>xxxviii</sup> Restrictions were to be imposed in all training areas, while camps would be set up near the Thames Estuary to imply future re-stationing in that area.<sup>xxxix</sup> Coupled with deceptive lighting, construction projects, and radio messaging, the Allies wished to tell the story that one and half divisions arrived in the Estuary each day. In total, the Hastings-Harwich area needed an occupation of one assault

division, along with whatever backup divisions, machinery, and equipment that could be spared or fabricated. Most matériel would be imitation, including the anti-aircraft batteries, but the plan called for as much real equipment as could be offered. Any surplus landing craft were to be sent to the nearby Ramsgate-Hastings area for assembly and inclusion with the deception forces. False wireless traffic proved essential to the deception, as mock communications were needed to magnify the actual presence to look like a real assault force. While the real forces across from Normandy were protected by Command's strict concealment, the dummy forces were going to be under a "discrete display" policy.<sup>xI</sup>

The principle behind "discreet display" was the calculated use of exposure alongside concealment to manipulate the enemy's understanding of what he was facing. Appendix Y was designed to skew Germany's perceptions of the hoaxed invasion force to the larger, thereby shifting Nazi focus away from Normandy and towards the Pas de Calais. The best way to achieve this effect was not by openly showcasing all activities, nor by the laxation of standard camouflage discipline. Instead, it would be accomplished by omitting technical camouflage advice.<sup>xii</sup>

The preparatory phase would begin when the assault forces left port in Scotland to sail for southern England, and would end when Allied troops landed in France.<sup>xiii</sup> The projected date for the preparatory phase to begin was 1 April. At that time, the real 'S' Force would leave its haven in Moray Firth, pass down the east coast of Scotland and England, through the Straits of Dover, and continue on. However, instead of the dummy force accompanying 'S' Force past the Dover Cliffs, Appendix Y planned for the dummy craft to look as if they were halting in the Thames Estuary.<sup>xiiii</sup> By floating fake landing crafts offshore, German reconnaissance aircrafts should spot the hoaxed movements in troops. The Abwehr should conclude from this that an assault force was repositioning itself, and was readying to strike at Calais.<sup>xiv</sup>

Setting up displays in the region would continue. More dummy landing crafts would be constructed in the mouth of the Thames River (the Nore area), and were meant to convince the Germans that they were part of an assault force, not a follow-up force. MT ships and coasters were to constitute the follow-up force, and would be present at the site to suggest involvement in the plan.<sup>xlv</sup> The Allies also needed to counterbalance the short-range fighters set up in south/southwest England, which would immediately betray Allied interest in Normandy, and not in Calais. The Allied response was to suggest that they were merely a portion of what was to be earmarked for east/southeast England. This story was to be reinforced by erecting dummy craft in the deception area, accompanied by the appropriate radio traffic – also completely fictitious.<sup>xlvi</sup> The goal was the German acceptance that they were reserved for protecting the invading forces – before, during, and after they embarked for Pas de Calais.<sup>xlvii</sup>

Personnel were also required to keep the Germans from discovering the Allied bluff, for reasons beyond construction and setting up camp. After the site was sufficiently set up, Morgan suggested a strong military presence remain in the deception area. The bases were to be constantly in motion, and preparations were not to halt – especially those that correlate with amphibious attacks.<sup>xlviii</sup> Morgan writes in Appendix Y:

“Large scale movements will be carried out with formations not immediately required overseas into the East and South-East sectors, to full capacity of these sectors, to simulate the movement of these forces overseas. These movements will be synchronized with the concentration and movement of the expeditionary force in other sectors.”<sup>xlix</sup>

Plans were also provided for civil defense initiatives, fire services, and education on evacuation procedures for civilians living in the deception area. Doing so, Morgan insisted, would affirm the significance of the Thames Estuary region to the Germans.<sup>1</sup> This ongoing display of men and equipment

was to convey to enemy observers – in the air and on the ground – an inflated reality of Allied presence. The troops in the Thames Estuary posed no real threat to Pas de Calais, and in fact it did not face any threat. For a Normandy invasion to be successful, Morgan insisted the Nazis be convinced otherwise.<sup>li</sup>

Morgan also stressed the need for wireless deception to maintain a cloud of uncertainty around when the final assault would launch. First, the Germans could deduce the time of the assault by observing troop relocations to the English Channel. Once these movements have been detected, the Germans need only observe for ship boarding, and all cover would be lost. This, Morgan proposed, should be countered by manipulating wireless traffic to simulate otherwise. For example, troop movements could be effectively masked by transmitting messages that imitate training exercises, thereby covering the real purpose of the operations, and suggesting a target date further in the future than in reality. This would be further reinforced through the use of “large scale combined exercises in the normal course of training, and maintaining active sea borne and aerial reconnaissance during the winter and spring.”<sup>lii</sup> Lastly, Morgan suggested that German aerial reconnaissance flights over southwest England (the actual preparation site) be restricted just before D-Day, so to suggest that more sensitive operations are just beginning, not concluding.<sup>liii</sup>

The post-assault phase would last from the moment the troops touched down until France was secured.<sup>liv</sup> The primary goal of this stage was to convince the Germans that, although an assault was made on Normandy, the Pas de Calais was still under threat. In order for Allied operations to secure a foothold in France, they needed the Germans to stay attentive of the Straits of Dover, and keep their forces there until at least 14 days after D-Day.<sup>lv</sup>

In order to hold the German’s attention after the landings in Normandy, a buildup of troops had to be maintained in east/southeast England. The threat on Pas de Calais would consist of any troops not in the expeditionary force, and those that were would not be needed before D plus 14. These troops,

along with two American divisions, would be sent to east/southeast England to represent no less than six divisions:<sup>lvi</sup> one assault, one follow-up, and four build-ups.<sup>lvii</sup> The two United States divisions were to undergo training operations in the area.<sup>lviii</sup> Wireless/other deceptive methods would cover for any deficiency in real forces.<sup>lix</sup>

Any landing craft that Operation Overlord could spare would also be allocated to the Dover-Nore area, supplemented by continual display of dummy landing craft. Displays of dummy aircraft would also continue, combined with dummy wireless traffic and aerial maneuvers carried out by real Allied aircraft. These activities were to re-enforce the threat that the dummy short-range aircraft posed on Germany. Morgan also incorporated bombing raids in this stage of the plan, targeting Calais to suggest an additional, main assault had yet to be launched.<sup>lx</sup>

## **Appendix Y – Three Annexures**

Attached to Appendix Y were three annexures, which Morgan titled as Annexures I, II, and III. These additions addressed specific procedures that should be carried out in Fortitude South's operations.<sup>lxi</sup>

Annexure I was also titled "Long-Term and Short-Term Preparations for Operation 'Overlord,'" and expanded on various long-term arrangements. First to be discussed were Allied policies on concealment and discrete display. The real invasion preparations in the South/Southwest should undergo strict protective measures to ensure the enemy will not discover their strength, position, and schedule. On the other hand, dummy craft, troop transfers, and radio traffic in the East/Southeast should be visible enough that the enemy will recognize an amassing of troops and supplies in the area.<sup>lxii</sup>

Furthermore, Annexure I pointed out the need to keep German wireless eavesdroppers from reacting once the actual invasion began. To keep the real wireless transmissions during the last stages of Operation Overlord from rousing German suspicions, Morgan proposed that scripted broadcasts be used throughout the deception to lax Nazi vigilance for the real invasion: “Further, by making no effort to conceal the intensity of this training and exaggerating the scope of large scale exercises, the enemy command may gradually become accustomed to this activity and it will be difficult to distinguish between the final preparations for this operation and these training activities.” Bombing raids were also mentioned in the report, and – although recommended that the targets be spread out evenly – the raids in the Pas de Calais-Belgium areas were to occur most frequently. The same system would apply to air and sea borne reconnaissance missions. Civil operations received more devotion in Annexure I than in Appendix Y. The desired outcome remained the same: that the Germans be convinced an invasion on Pas de Calais would launch after the commencement of Overlord, twenty days following being the current mark.<sup>lxiii</sup>

Part two of Annexure I detailed the short-term projects for Appendix Y, and included specifics on deceptive lighting, artillery, and aircraft policies. On lighting it was noted that, at least three months prior to D-Day, the lighting of “all ports, harbors, transit areas, and assembly areas” within the deception area should match those coastal areas that are outside. The use of dummy artillery and anti-aircraft guns in east/southeast Britain received more attention here, as did the displays of dummy aircraft alongside real fighter planes.<sup>lxiv</sup>

Annexure II, alternately known as “Operation ‘Overlord’ Camouflage and Concealment,” provided how the real “Overlord” operations should be protected from enemy knowledge through cover and secrecy. Additional clarifications were given for “discreet display” procedures that covered the deception operation, and included:

- a. Deliberately omitting technical camouflage advise and not using the camouflage surveys and schemes which were designed for concealment
- b. Where possible, siting assembly and transit areas away from built-up and enclosed areas and by permitting a greater degree of concentration than would be acceptable if heavy air bombardment were expected
- c. Carrying out day movements, between concentration and assembly areas and by arranging halting places on routes where concealment is difficult.<sup>lxv</sup>

Although these steps were prescribed as standard procedures for Allied camouflage and concealment, they did not apply across the board. Annexure II left the air forces to continue with “normal” techniques.<sup>lxvi</sup>

Annexure III addressed the need to prevent leakages of sensitive information from Allied troops participating in the deception. It was understood by the planners that soldiers do not always believe what their commanding officers tell them, but often form their own opinions. Due to this, the planners knew that allied troops must be under the impression that erecting fictitious bases was nothing out of the ordinary. The troops must understand that their involvement was typical of any military operation, therefore had no special significance besides normal procedures. By being convinced that “dummy equipment is part of the normal equipment of war, that it is used extensively by both sides in most operations, either to distract the enemy’s attention from important targets or to misrepresent intention,” the troops would not realize the importance of their activities. Likewise would anybody who discovered their activities from the loose lips of someone involved in the operation.<sup>lxvii</sup>

On 20 November, 1943 Appendix Y was submitted to the British Chiefs of Staff. A delay was expected for the plan’s review, as the overall deception plan had yet to be reached. Due to its urgency,

Morgan requested that certain aspects of the plan be given approval, if only on a provisional basis. The three items that were requested were:

1. The introduction of periodic wireless silence
2. The commencement of specific procedures that would convince German observers (both by air and by ground), that the Eastern counties of England provided better bases of operation to host an invasion than what the truth indicated
3. That the use of camouflage techniques be used in the West, alongside the careful use of display in the East<sup>lxviii</sup>

The last of the three aforementioned policies was actually already in effect; Morgan's request was designed to do no more than reassert an existing policy. All three were approved by 30 November, on a preliminary basis, on condition that all displays in eastern England be held off as late as possible.<sup>lxix</sup>

As Appendix Y directed plans for the post D-Day period before commanders agreed on a plan for Operation Overlord itself, many officials opposed Appendix Y.<sup>lxx</sup> Of these included Lieutenant Jacob L. Devers, the CG ETOUSA (European Theatre of Operations, U.S. Army), the 'A' Force Commander Dudley Clarke (soon to be made brigadier),<sup>lxxi</sup> and General Bernard Montgomery's staff. The Controlling Officer of LCS, Colonel John Bevan, also disagreed with Appendix Y by continuing to support his own Plan Jael. In doing so, he cited three reasons. First, Appendix Y could not be accepted until the Cairo Conference had concluded. Second, the original Appendix Y was proposed to be an addition to the Overlord plan; this could not be done. The tactical cover plan for Operation Overlord required a totally separate operation. Third, as mentioned before, since the Allies had not yet developed a plan for post D-Day operations, it was not worthwhile to design a cover plan for that time.<sup>lxxii</sup>

Operation Overlord was first scheduled for early May, 1943; this was reiterated to Stalin at the Tehran Conference in November. Additional agreements made included an additional landing in

southern France and a Soviet offensive to commence that summer.<sup>lxxiii</sup> On 6 December, Bevan was instructed to produce the final cover plan that would protect the largest amphibious invasion in history. Over the next three weeks Bevan labored on the project,<sup>lxxiv</sup> combining elements from both Appendix Y and Plan Jael. Bevan, still head of the LCS, delivered the final draft to the British Chiefs of Staff on 21 December,<sup>lxxv</sup> and was sequentially passed on Christmas Day, 1943.<sup>lxxvi</sup>

## Deceptive Planning

The final, overall plan was renamed Bodyguard, of which Operation Fortitude-South claimed a part. Bodyguard required Bevan and the LCS to alter Jael and Appendix Y to address the same two particular problems. First, Germans must be lead towards relocating their forces away from where they faced the real threats: first at Normandy with Operation Overlord, next with the successive post D-Day landings on France with Operation Anvil, and lastly the Soviet offences on the Eastern Front. Secondly, Allied preparations for a cross-channel invasion could not be kept hidden from enemy intelligence forever. Therefore, since Allied intentions to invade Europe could not be masked, the task of the deception was to mislead the Nazis about the strengths, goals, and timings of those invasions. Commanders within the various theatres would all play a part in addressing these problems. To prevent Nazi troops from defending these key operations, Allied campaigns in southern Germany and northern Italy would pin German forces down and prevent their relocation. Deceptive operations in Scandinavia and southeast Europe were drawn up to distract enemy attention as well.<sup>lxxvii</sup> Some provisions were carried over from previous plans. The inclusion of Allied bombings within Germany (known as Operation Point Blank)<sup>lxxviii</sup> originated from Plan Jael.<sup>lxxix</sup> Some aspects of Bodyguard, however, were original and not found within any of its parent plans. Those that are most notable are:

1. The Russian summer offensive would commence in the end of June;

2. Operation Overlord would not be launched until later that summer;
3. The Russians would assist in an assault on Northern Norway, Bulgaria, and Rumania<sup>lxxx</sup>

The cross-Channel invasion was given a total strength of fifty divisions, with twelve divisions to carry out the actual assault.<sup>lxxxi</sup> Seven divisions would carry the initial assault against Pas de Calais, with two divisions east of Cap Gris Nez, and five to the south. The follow-up assault and accompanying post-assault build-up would require six additional divisions. The fifty divisions would transfer across the Dover Straits at a rate of around three divisions per day, which would proceed to capture Antwerp and Brussels, and then advance onto the Ruhr.<sup>lxxxii</sup> The assaults on Norway would be assigned to Operation Fortitude-North, and is beyond the scope of this paper. The Balkan assaults were covered by the commanders in control of those theatres,<sup>lxxxiii</sup> thus also independent of Fortitude-South, the topic of this paper.

## Planning Changes Hands

In December 1943, control over the planning of Fortitude and the Operation Overlord deception policies changed hands. General Dwight D. Eisenhower was informed of his new role as Supreme Allied Commander. Therefore, as head of SHAEF (Supreme Headquarters Allied Expeditionary Force), Eisenhower was free to delegate the Overlord planning task from COSSAC to General Sir Bernard Montgomery. As the Commanding Officer of the 21<sup>st</sup> Army Group, Montgomery now had exclusive control over all ground forces involved in Operation Overlord, and immediately took over the COSSAC's deception plan. COSSAC's deception department was handed over to Noel Wild, deputy to Dudley Clarke in his 'A' Force. J.A. Jervis Read, the former COSSAC chief, was reassigned to physical deception, and Roger Hesketh was given charge over the Intelligence department.<sup>lxxxiv</sup>

At this point, Bevan and his LCS lost official control over the deception operations to the new department, known as “SHAEF Ops (B).” Regardless, Bevan managed to maintain control over the execution of the plans, and in practice LCS and Ops (B) worked as one. It was fortunate that everyone in charge of the planning departments were personally compatible, with all offices working together with extraordinary smoothness and efficiency.<sup>lxxxv</sup>

With SHAEF Ops (B) officially in charge of the planning of Operation Fortitude, Noel Wilds began work on another cover plan that Montgomery, his staff, and SHAEF could agree on. Military command over Fortitude South was given to Montgomery and his 21<sup>st</sup> Army Group. Montgomery’s deception section, “G(R),” was guided by Colonel David Strangeways.<sup>lxxxvi</sup>

Wild did not enjoy his assignment of working with Strangeways on the Fortitude plans. Regardless, he produced the initial script for Fortitude South. The Germans were to believe that fifty assault divisions were to be available for an assault on the Pas de Calais, holding German attention there and away from Normandy.<sup>lxxxvii</sup> Obligations for the days following the Normandy invasion were not given much devotion. The planners only supplied the following instructions: “a force of one assault, one follow-up and four build-up divisions is assembled in and behind the Thames Estuary and the south-east coast ports to carry out a subsidiary operation in the Pas de Calais area with the object of drawing German forces away from the main target area.” Besides delegating these six divisions to threaten the Pas de Calais, little more was agreed upon about diverting German perception of where the post-Normandy assault would occur.<sup>lxxxviii</sup>

Misleading the Germans as to the location of the attack was not the only issue the planners had to tackle. One major issue that threatened the development of Operation Fortitude-South regarded keeping the enemy unaware of the true date and time of the real invasion. This was first addressed by military planners with a “postponement” policy, where the Germans were to be persuaded that the

invasion was to commence later than it would in truth.<sup>lxxxix</sup> The Germans were to be persuaded that the invasion would not be launched until the late summer, and to be persuaded so by emphasizing the following:

- The Allies suffered from shortages of landing craft;
- Anglo-American forces in Britain needed more troops for the invasion than in reality;
- Reports on the American troops arriving in the United Kingdom were to describe them as being untrained or not completely ready for combat;
- Every effort conceivable was to be made to hide the return of allied troops from the Mediterranean

It was with these policies that the Allies planned to convey an exaggerated state of unpreparedness to the Germans while leading up to the invasion, and then to exaggerate its scale when it did come. They were accepted by the designers despite the fact advanced preparations on the ground would contradict any invasion dates scheduled too far in the future. The goal from that point forward would be maximizing the enemy's uncertainty of the "timing, direction, and weight" of Operation Overlord.<sup>xc</sup>

Giving the Germans this delayed timetable for the approaching assault proved a considerable challenge, and required serious study. Preparations for the deceptive attack on Pas de Calais were meant to suggest an assault around 15 July, while the real assault on Normandy was scheduled for 1 June. With the actual invasion being launched 45 days earlier than when it was actually suspected, the element of surprise would be secured. However, when the Germans finally noted that the assault forces facing Normandy were to be ready *before* those across from Pas de Calais, the Nazis could calculate the true invasion dates by finding a date between 1 June and 15 July. Even more likely, they would conclude that the main invasion upon Normandy would occur first on 1 June, while the one on Pas de Calais

would occur one month and two weeks following. An additional complication, first noted by Major-General N. C. D. Brownjohn, was that the Germans might not even notice the developments in the deception area prior to D-Day, thus denying any danger on Pas de Calais altogether. Any of these options would defeat the entire purpose of Operation Fortitude-South, and indeed a main goal of Bodyguard plan as a whole, i.e., to suggest and convince Nazi Germany that the real target in France was in fact Pas de Calais, and thus faced the most eminent threat. Unfortunately, the preparations for Operation Overlord that was to assault Normandy could not be halted, slackened, or postponed; the deadline for preparations was set for 1 June, and delaying any preparations for Normandy – even for the sake of the deception – was not an option.<sup>xci</sup>

Major-General Brownjohn proposed that unless the false assault on Pas de Calais was not dropped from D plus 45 to D minus 21 at the least, then there was “a risk of prejudicing...concealment of the target area because unreadiness in South-East England as compared with completed preparations elsewhere might be interpreted as indicating the absence of a threat to the Pas de Calais.” General Montgomery’s Chief of Staff wrote to Major-General F. de Guingand on 25 January, 1944 to voice his solution to the issue. ‘I consider that the enemy should be led to believe that from now on our target in Northern Europe is the Pas de Calais area. Once our efforts have failed to make the enemy believe that our attack will not take place before the late summer, we should concentrate on telling him that the Pas de Calais area is our *early* objective.’ This proved too problematic, as telling the enemy a story by providing contradictory evidence was unlikely to be convincing at all.<sup>xcii</sup>

In a response given that same day, General de Guingand criticized that option, and instead proposed an entirely new approach to the deception. “I do not agree with the object which has been given for the attack on the Pas de Calais. If we induce the enemy to believe the story, he will not react in the way we want. I feel we must, from D-Day onwards, endeavor to persuade him that our *main* attack

is going to develop later in the Pas de Calais area, and it is hoped that NEPTUNE will draw away reserves from that area.” Up to this point, the post-assault deceptions were only minor affairs compared to the operations that led up to the landings on Normandy. The deception in east/southeast England was to draw attention away from Normandy and direct it towards Pas de Calais, securing a successful landing on Normandy. Unfortunately, the preparations for Normandy were further advanced than those for the Pas de Calais, leading observers to note a landing on the former to be most imminent, lessening the threats posed against the latter. What General de Guingand proposed was that the threat on Calais be continued with greater importance into the post-assault phase. An attack on Normandy should be suspected by the Germans to be a *diversion* to draw forces away from Calais, where the actual, main assault would be launched after D-Day. This change was accepted into the final draft of Operation Fortitude.<sup>xciii</sup>

## Change of Plans

At this point, the goal for the pre-invasion deception was to convince the German that there were two assault divisions (complete with craft and shipping) in southeast England, and four more assault divisions kept ready in the Portsmouth area.<sup>xciv</sup> This part of the narrative remained unchanged from the previous version. After the five divisions on the south coast landed on the beaches of Normandy (when the deception enters the post-assault phase), the Germans were to understand a new story. First, the Allied landing craft would combine with the other four divisions in the Southeast upon returning to England. Second, when these assault divisions (nine in total) are combined with the two imaginary assault divisions in the East, the Germans will perceive a continued threat to the Pas de Calais. The buildups would continue until the second, more potent assault was launched across the Straits of Dover, aimed at capturing the German-controlled ports there. Of course, that assault would not come,

but German forces would still maintain their concentrations there until an Allied beachhead was secured in France.<sup>xcv</sup>

## Solution begets problems

Although this revision resolved a grave inconsistency in Allied plans, it begat another problem for the planners to address. The Allies understood the post-Overlord assault plan must suggest that an attack on the Pas de Calais was to follow, and that the Normandy force was no more than a diversion. They still agreed that the “postponement” story should still play a role in the deception plan, despite the aforementioned difficulties inherent in the plan, i.e., leading the Germans to accept a later target date for the invasion than in reality, despite what preparations may tell once they are discovered and monitored. To do so, the Germans must understand that the assembling forces are not totally prepared for a full assault, which also proved problematic. The difficulty was if the pre-Overlord narrative said that the forces assembling opposite the French coast were weak and unprepared, and not capable of any assault until mid-July, what could be said after a success in June? Once the assault on Normandy was accomplished – and being apparently carried out with the bulk of Allied forces – who would be left to carry out the assault on Calais some 45 days later? With the majority of US, British, and Canadian troops lacking in number, equipment, and training *before* the “small-scale diversion” on Normandy, it would be increasingly difficult to conduct another “main, grand assault” on Pas de Calais *after* the best forces have already been used.<sup>xcvi</sup>

The first, most obvious route that could be taken to resolve this incongruity between the invasion of Normandy and the invasion of the Pas de Calais is to increase the troops levels in east/southeast England (the number discussed was 50 divisions). This could not be done prior to the execution of Operation Overlord because Allied activities needed to undergo a “simulated reduction” of

military capability before D-Day. Without making cuts to the military operations, Germany's acceptance of a later date for a secondary invasion would not be reinforced.<sup>xcvii</sup>

To conduct a buildup of military forces directly following D-Day required an enormously accelerated rate of reinforcement in the area. This was a logistical impossibility; the shipping space could not hold such a burden successfully. To solve this, the planners changed the terms regarding the preparedness of the forces stationed across from Pas de Calais. Instead of measuring troop deficiencies in terms of *quantity*, with the need being greater reinforcements, they would instead emphasize their *quality* and their need for more training. As explained in the third draft of Operation Fortitude, if the second invasion needed a target date of 15 July, the planners must "minimize the state of preparedness of the NEPTUNE forces by misleading the enemy about the state of training, organization, equipment, and their location." Whatever was actually lacking in terms of numbers would be filled by American troops.<sup>xcviii</sup> Those American troops would be part of a "paper organization," known as the First United States Army Group (FUSAG). FUSAG, a fictitious military force, was designed to carry out Fortitude South; it would work side-by-side with Montgomery's 21<sup>st</sup> Army Group and its assignment to carry out Operation Overlord.<sup>xcix</sup>

## **FUSAG and the Army Group that Never Was**

The idea to create a new and completely fictitious army group was put forward by Strangeways,<sup>c</sup> and was eventually approved and set up for command under Lieutenant General George S. Patton.<sup>ci</sup> The Germans had long held that Patton would lead the assault on Europe, so transferring command of FUSAG over to him fed into what Germany already believed at the time. Accompanied by a six-part program known as Operation Quicksilver, the allies would implement procedures discussed earlier in the planning processes to enforce the threat on Calais.<sup>cii</sup> Under the direction of Quicksilver, FUSAG was

divided between the First Canadian Army (the “assault” force) and the Third U.S. Army (the “Build-up” force). Both the First Canadian Army and the U.S. Third Army totaled two Corps each: the 2<sup>nd</sup> Canadian Corps and VIII Corps under Canadian control and the XX Armored Corps and the XII Corps under U.S. Control. In total, six infantry divisions and five armored divisions were represented by FUSAG,<sup>ciii</sup> amassing over one million fictional soldiers to assault the Pas de Calais.<sup>civ</sup> In order to produce enough evidence to support such a force, Quicksilver was divided into six parts. Each part shall be examined and summarized here.

Quicksilver I was divided into two parts, and dealt with the “story” behind FUSAG. Part I deals with the threat to the Pas de Calais before the Normandy invasion.<sup>cv</sup> This threat was to be posed by FUSAG setting up its camp in east/southeast England. FUSAG would rely on the Ninth U.S. Air Force for aerial support, which had to set up stations in the area as well.<sup>cvi</sup> Part two of Quicksilver I was to commence after D-Day, requiring cooperation with the real 21<sup>st</sup> Army Group. Once the 21<sup>st</sup> Army Group lands in France, the goal of Quicksilver was for it to appear “enticing” to the German military, while FUSAG undertakes a series of large-scale exercises. This will lead Germany into accepting this story: that another, main Allied attack is to strike at the Pas de Calais, and the 21<sup>st</sup> Army Group’s assault was no more than a diversion. Germany will keep their troops in the Pas de Calais, expecting an assault by FUSAG from across the Straits of Dover.<sup>cvi</sup>

Quicksilver II dealt specifically with deceptive radio activity, first with FUSAG’s training exercises and relocation into the east/southeast regions in England.<sup>cvi</sup> Double agents working for the Allies were to confirm these operations to the German command.<sup>cix</sup> Quicksilver III was to cover the physical displays for the FUSAG operations. Orders were given for the assembly of 270 dummy landing craft in the deception area. They were to be made visible to support FUSAG’s validity in case German aerial reconnaissance came to investigate the area.<sup>cx</sup>

In the planning of Quicksilver III, the deception operators used specially designed dummy landing craft to simulate the different types of real landing craft. "Bigbobs," made of steel tubing and canvas, were made to look like landing craft tanks (LCTs). Its construction allowed for the attachment of floats for movement in water, while wheels permitted movement over "reasonably smooth" surfaces. Measuring 160 by 30 feet, the bigbob weighed five and one-half tons.<sup>cxix</sup>

To simulate the presence of landing craft-assaults (LCAs), inflatable rubber vehicles were erected. Known as "wetbobs," these rubber dummies measured around seven feet in length and two feet in diameter; ten to twenty wetbobs could be carried by a single three-ton vehicle. It was found that the exhaust from a 30 cwt truck could be used to inflate a wetbob in fifteen minutes, while an 8 cwt truck took forty-five minutes. A full inflation required an initial 300-400 cubic feet of air, and additional "topping off" by compressed gas cylinders. Inflated, a wetbob weighed 200 pounds, and stood forty by eight by four feet. Due to its light weight and large profile, a wetbob was very susceptible to wind gusts, and needed secure anchoring on land and in the water. Both bigbobs and wetbobs were constructed at night, for obvious security reasons.<sup>cxii</sup>

To provide the aerial component to FUSAG, Quicksilver IV was created. It demanded that fighter squadrons in southern England begin training exercises, while air-sea rescue teams stationed in southeast England do the same. In order to test the efficiency of Allied fighter squadrons in "shuttle service" between bases, large-scale aerial operations in east and southeast England were to be conducted three days before Operation Overlord. Calculated use of radio telephony (R/T) was called upon to hide the transfer of aircraft from southern England to Kent and the Thames Estuary. To intensify German attention away from Normandy just before the invasion was to be launched, Allies would bomb the beaches and railways in the Pas de Calais area.<sup>cxiii</sup>

The effects of Quicksilver IV were to continue after the invasion in the form of continued bombing, supported by Britain's double-agent spy network to give credit to the deception narrative, i.e., the main assault had yet to come, and would be launched against the Pas de Calais.<sup>cxiv</sup>

Quicksilver V gave credibility to FUSAG operations by suggesting an increased need for wired and wireless communications. This would be done by falsely appearing to be drilling new tunnels for laying of communication wire. The erection of new wireless stations could be easily represented with the opening of new wireless circuits.<sup>cxv</sup>

As was to be expected from a real military installation preparing for an invasion, FUSAG's activities should not halt at night. Quicksilver VI covered these activities through the erection of night lighting posts, the illumination of beaches, systems to simulate vehicle headlights, and all other lighting that demonstrates troop activity where it should be shown.<sup>cxvi</sup>

## Evaluation

It was through the cooperation of many that these directives ultimately became known as Operation Fortitude-South, and evolved into its final stage. On 26 February, 1944, Operation Fortitude was given approval by the Combined Chiefs of Staff. Under the supervision of the Supreme Allied Commander, both Operation Fortitude and Operation Overlord were executed<sup>cxvii</sup> with extraordinary successful results, especially when taken from Germany's view. Field Marshal von Rundstedt was clearly convinced that the Allies would attack at the Pas de Calais, as was Adolf Hitler. So strong were they in their convictions that when Field Marshal Erwin Rommel objected and pointed out Normandy as the ideal site, his conclusions were ignored. Although Rommel correctly concluded that the Pas de Calais was not the true target, not one of the military leaders could deduce the proper date and time of the invasion, whether it was to come at the Pas de Calais, or at Normandy.<sup>cxviii</sup>

The invasion forces landed in Normandy on 6 June, 1944, but little alarm was raised, if any. In fact, Hitler and his OKW<sup>5</sup> had succumbed to the deception to the point that they believed Normandy was “the diversionary attack they had long expected.” Hitler refused multiple requests to reinforce the troops in Normandy, and by 12 April was losing patience with the Allies for delaying the second assault. That night, to tempt the Allies into action, Hitler unleashed nineteen V-1 rockets, four actually landing in London. The Russians launched their summer offensive on 20 June, and began making headway through the Eastern Front. This placed further limitations on all resources that would be available for defending France. By this time, von Rundstedt came to the realization that the second invasion was not coming, and requested assistance from the Fifteenth Army. The OKW denied this assistance, under conditions that the OKW and Hitler still believed an assault would come from the Pas de Calais. On 8 July, in a letter to his commanders, Hitler wrote: “The enemy has succeeded in landing in Normandy and in seizing with astonishing speed the Cotentin Peninsula...In spite of the attendant risks, the enemy will probably attempt a second landing in the 15<sup>th</sup> Army’s sector...” Obviously, even as Allied advances pushed German troops further back into Europe, Operation Fortitude’s role in deceiving Nazi commanders was an astonishing, *reoccurring* success. The goals set forth in the beginning, before Fortitude took its final shape, were all accomplished. A successful landing on Normandy was indeed secured, as was the establishment of a beachhead that Allied troops could operate out of. Most notable of all, a sound foothold in France was secured, as unhindered as possible, because the enemy’s attention was directed elsewhere.<sup>cxix</sup> Considering the scale of the invasion force and the magnitude of Operation Fortitude, it was undoubtedly the largest and most important deception operation of the Second World War.

---

<sup>5</sup> Oberkommando der Wehrmacht, the German “Supreme Command of the Armed Forces”

## Bibliography

Ambrose, Stephen E. *D-Day*. New York: Simon and Schuster, Inc., 1994.

Badsey, Stephen. *Normandy, 1944*. Barnes & Noble, Inc., 2000.

Barbier, Mary Kathryn. *D-Day Deception: Operation Fortitude and the Normandy Invasion*. Westport, CT: Praeger Security International, 2007.

Belchem, Brig David, Chief-of-Staff, 21 Army Group. "RNZRSA - News - Prime TV to screen D-Day World Premiere." *RSA - The Royal New Zealand Returned and Services' Association Inc.* 2004. [http://basecamp.rsa.org.nz/about/nws2004jun/d\\_day.htm](http://basecamp.rsa.org.nz/about/nws2004jun/d_day.htm) (accessed April 26, 2012).

Crowdy, Terry. *Deceiving Hitler: double cross and deception in World War II*. Westminster, MD: Osprey Publishing, 2008.

Donovan, Lieutenant Colonel Michael J. United States Marine Corps. *Strategic Deception: Operation Fortitude*. Strategy Research Project, U.S. Army War College, 2002.

Hesketh, Roger. *Fortitude: The D-Day Deception Campaign*. Woodstock, NY: St. Ermin's Press, 2000.

Leech, Colonel B. C., E.D., Royal Canadian Army Medical Corps. "R.C.A.M.C. Anaesthetic Experiences: Dieppe Raid Casualties, August 19-20, 1942." The National Center for Biotechnology Information, 1943.

Levine, Joshua. *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*. London: Harper Collins, 2011.

McCombs, Don, and Fred L. Worth. "Operation Sledgehammer." In *World War II: 4,139 Strange and Fascinating Facts*, 440. New York: Wings Books, 1996.

Moore, Major Allen T. *The Principles of Military Deception and Operation Quicksilver*. Research Report, Maxwell Air Force Base, 2009.

The D-Day Museum. *Frequently Asked Questions for D-Day and the Battle of Normandy*. <http://www.ddaymuseum.co.uk/faq.htm> (accessed February 2012, 2012).

The U.S. Army. *D-Day June 6th, 1944*. <http://www.army.mil/d-day/> (accessed February 3, 2012).

Wendell, Major Jon S., United States Air Force. *Strategic Deception Behind the Normandy Invasion*. Military Case Study, Marine Corps University Command and Staff College, 1997.

---

<sup>i</sup> Stephen Badsey, *Normandy 1944*. (Barnes & Noble, Inc., 2000) p. 6.

<sup>ii</sup> Brig David Belchem, Chief-of-Staff, 21 Army Group, "RNZRSA - News - Prime TV to screen D-Day World Premiere," D-Day Battle Statistics, 2004 <<http://basecamp.rsa.org.nz/about/nws2004jun/DD01.pdf>> (26 April 2012).

<sup>iii</sup> The U.S. Army, "*D-Day June 6th, 1944*" <<http://www.army.mil/d-day/>> (3 February 2012).

<sup>iv</sup> Brig David Belchem, Chief-of-Staff, 21 Army Group, "RNZRSA - News - Prime TV to screen D-Day World Premiere," D-Day Battle Statistics, 2004 <<http://basecamp.rsa.org.nz/about/nws2004jun/DD01.pdf>> (26 April 2012).

<sup>v</sup> Stephen E. Ambrose, "*D-Day*," (New York: Simon and Schuster, Inc.1994) p. 25

<sup>vi</sup> The D-Day Museum, "*Frequently Asked Questions for D-Day and the Battle of Normandy*," <<http://www.ddaymuseum.co.uk/faq.htm>> (3 February 2012).

<sup>vii</sup> Winston Churchill, as quoted in Joseph E. Perisco, "*Roosevelt's Secret War: FDR and World War II Espionage*" in Mary Kathryn Barbier, "*D-Day Deception: Operation Fortitude and the Normandy Invasion*," (Westport, CT: 2007), p. 11.

<sup>viii</sup> Major Jon S. Wendell, United States Air Force, "*Strategic Deception Behind the Normandy Invasion*," Marine Corps University Command and Staff College, <<http://www.globalsecurity.org/military/library/report/1997/Wendell.htm>>

<sup>ix</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007) p. 1

<sup>x</sup> Winston Churchill, as quoted in Carlo D'Este, "*Decision in Normandy*," in Stephen E. Ambrose, *D-Day*, (New York: Simon and Schuster, Inc.1994) p. 40.

<sup>xi</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 2

<sup>xii</sup> Don McCombs and Fred L. Worth, "Operation Sledgehammer," in "*World War II: 4,139 Strange and Fascinating Facts*," (New York: Wings Books, 1996), p. 440.

<sup>xiii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 2

<sup>xiv</sup> Don McCombs and Fred L. Worth, "Dieppe," in "*World War II: 4,139 Strange and Fascinating Facts*," (New York: Wings Books, 1996), p. 144.

<sup>xv</sup> Ibid.

<sup>xvi</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 2

---

<sup>xvii</sup> Colonel B. C. Leech. E.D., Royal Canadian Army Medical Corps., "R.C.A.M.C. Anaesthetic Experiences: Dieppe Raid Casualties, August 19-20, 1942," The National Center for Biotechnology Information, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1998586/pdf/procrsmed00621-0005.pdf> (3 February 2012).

<sup>xviii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 2

<sup>xix</sup> *Ibid.*, pp. 2-3.

<sup>xx</sup> Lieutenant Colonel Michael J. Donovan, United States Marine Corps, "Strategic Deception: Operation Fortitude," U.S. Army War College, < <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404434>>

<sup>xxi</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 41

<sup>xxii</sup> *Ibid.*, p. 12

<sup>xxiii</sup> *Ibid.*, p. 3

<sup>xxiv</sup> Don McCombs and Fred L. Worth, "Operation Baytown" in "World War II: 4,139 Strange and Fascinating Facts," (New York: Wings Books, 1996), p. 420

<sup>xxv</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 3

<sup>xxvi</sup> *Ibid.*, p. 12

<sup>xxvii</sup> Don McCombs and Fred L. Worth, "Abwehr," in "World War II: 4,139 Strange and Fascinating Facts," (New York: Wings Books, 1996) p. 3.

<sup>xxviii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 12

<sup>xxix</sup> Don McCombs and Fred L. Worth, "Wingate, Sir Ronald E. L.," in "World War II: 4,139 Strange and Fascinating Facts," (New York: Wings Books, 1996), p. 643.

<sup>xxx</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 12

<sup>xxxi</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), pp. 12-3

<sup>xxxii</sup> Terry Crowdy, *Deceiving Hitler: double cross and deception in World War II*, (Westminster, MD: Osprey Publishing, 2008), 227.

<sup>xxxiii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), pp. 12-3

<sup>xxxiv</sup> *Ibid.*, p. 13

<sup>xxxv</sup> *Ibid.*

---

<sup>xxxvi</sup> Ibid., p. 15

<sup>xxxvii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), pp. 23-24.

<sup>xxxviii</sup> Ibid., 24

<sup>xxxix</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 15

<sup>xl</sup> Ibid., pp. 14-15

<sup>xli</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), p. 23

<sup>xlii</sup> Ibid.

<sup>xliiii</sup> Ibid., p. 24.

<sup>xliiv</sup> Ibid.

<sup>xlv</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 15

<sup>xlvi</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 24.

<sup>xlvii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 14

<sup>xlviii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 24

<sup>xlix</sup> Ibid.,

<sup>i</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 14

<sup>ii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 24

<sup>iii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 14

<sup>iiii</sup> Ibid., p. 14.

<sup>lv</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 23.

<sup>lv</sup> Ibid., p. 24.

<sup>lvi</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 15

<sup>lvii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 25.

---

<sup>lviii</sup> Ibid.,

<sup>lix</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p. 15

<sup>lx</sup> Ibid., pp. 15-16.

<sup>lxi</sup> Ibid., p.16.

<sup>lxii</sup> Ibid.

<sup>lxiii</sup> Ibid.

<sup>lxiv</sup> Ibid.

<sup>lxv</sup> Ibid.

<sup>lxvi</sup> Ibid., p.17.

<sup>lxvii</sup> Ibid.

<sup>lxviii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 25.

<sup>lxix</sup> Ibid.,

.

<sup>lxx</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p.18.

<sup>lxxi</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 197

<sup>lxxii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p.18.

<sup>lxxiii</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 197

<sup>lxxiv</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 26.

<sup>lxxv</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 198

<sup>lxxvi</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 26

.

<sup>lxxvii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p.19.

<sup>lxxviii</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 198

<sup>lxxix</sup> Terry Crowdy, *Deceiving Hitler: double cross and deception in World War II*, (Westminster, MD: Osprey Publishing, 2008), 227.

---

<sup>lxxx</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007), p.19.

<sup>lxxxi</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 198

<sup>lxxxii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 28.

<sup>lxxxiii</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 198

<sup>lxxxiv</sup> *Ibid.*, p. 200

<sup>lxxxv</sup> *Ibid.*, pp. 200 – 01

<sup>lxxxvi</sup> *Ibid.*, pp. 201 – 02

<sup>lxxxvii</sup> *Ibid.*, pp. 202 – 03

<sup>lxxxviii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), pp. 27-29.

<sup>lxxxix</sup> *Ibid.*, pp. 27-28.

<sup>xc</sup> *Ibid.*

<sup>xc<sup>i</sup></sup> *Ibid.*, p. 28.

<sup>xc<sup>ii</sup></sup> *Ibid.*, p. 29.

<sup>xc<sup>iii</sup></sup> *Ibid.*

<sup>xc<sup>iv</sup></sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) pp. 203 – 04

<sup>xc<sup>v</sup></sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), p. 29.

<sup>xc<sup>vi</sup></sup> *Ibid.*

<sup>xc<sup>vii</sup></sup> *Ibid.*

<sup>xc<sup>viii</sup></sup> *Ibid.*

<sup>xc<sup>ix</sup></sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007) p. 66

<sup>c</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 205

- 
- <sup>ci</sup> Major Allen T. Moore, *The Principles of Military Deception and Operation Quicksilver*, (Maxwell Air Force Base, Alabama, 2009)<http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA536835> (accessed April 8, 2012), p. 5.
- <sup>cii</sup> Lieutenant Colonel Michael J. Donovan, United States Marine Corps, "Strategic Deception: Operation Fortitude," U.S. Army War College, < <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404434>>
- <sup>ciii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), p. 64
- <sup>civ</sup> Lieutenant Colonel Michael J. Donovan, United States Marine Corps, "Strategic Deception: Operation Fortitude," U.S. Army War College, < <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404434>>
- <sup>cv</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 64.
- <sup>cvi</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007) pp. 67-68
- <sup>cvii</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), 220.
- <sup>cviii</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007) p. 68
- <sup>cix</sup> Joshua Levine, *Operation Fortitude: The Story of the Spy Operation That Saved D-Day*, (London : Harper Collins, 2011) p. 206
- <sup>cx</sup> Mary Kathryn Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, (Westport, CT: Praeger Security International, 2007) p. 68
- <sup>cxii</sup> *Ibid.*, p. 28
- <sup>cxii</sup> *Ibid.*
- <sup>cxiii</sup> *Ibid.*, pp. 68 - 9
- <sup>cxiv</sup> *Ibid.*, p. 69
- <sup>cxv</sup> *Ibid.*
- <sup>cxvi</sup> Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (Woodstock, New York: St. Ermin's Press, 2000), p. 221.
- <sup>cxvii</sup> *Ibid.*, p. 30.
- <sup>cxviii</sup> Lieutenant Colonel Michael J. Donovan, United States Marine Corps, "Strategic Deception: Operation Fortitude," U.S. Army War College, < <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA404434>> p. 13
- <sup>cxix</sup> *Ibid.*, p. 13 - 15