The Coldest War
The Deployment of the Luftwaffe over Norway 1940-1945

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To Sandra, Nicholas, Josiah, Nathanael and Isaac
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Abbreviations

AWM  Australian War Memorial
NA    National Archives, Washington, D.C.
OKH   Oberkommando des Heeres (High Command of the Army)
OKL   Oberkommando der Luftwaffe (High Command of the Luftwaffe)
OKM   Oberkommando der Marine (High Command of the Navy)
OKW   Oberkommando der Wehrmacht (High Command of the Armed Forces)
USAFHRA United States Air Force Historical Research Agency, Maxwell Air Force Base, Montgomery, Alabama
Luftflotte. Although at the outbreak of hostilities the Luftwaffe’s operational units were divided into four Luftflotten (Air Fleets) numbered 1 through to 4 it soon became evident that these would be insufficient to cover the operational theatres into which the war spread and by the end of the Second World War a further three air fleets had been added: Luftflotten 5, 6 and Reich. Each of these Luftflotte were composed of a wide range of machines and personnel necessary for a “stand-alone” operational air force along the lines of those deployed overseas by the RAF and USAAF and as such included not only strike units of bombers, fighters, and close air support aircraft but also the requisite reconnaissance, transport and flak units. Maintenance and supply services for each Luftflotte were carried out by one or more Luftgau (Air Districts), enabling the air fleets to concentrate combat duties.

Fliegerkorps. Numbering between 300 and 750 aircraft the Fliegerkorps (Air Corps) was the largest operational command within the air fleet. Usually subordinated to the regional Luftflotte, its strength and composition was dependent on its function and the importance of the theatre into which it was deployed. On occasions, individual air corps operated autonomous of regional air fleets when the need arose. Like Fliegerkorps X, which spearheaded the German invasion of Norway in April 1940, all air corps were differentiated by Roman numerals.

Geschwader. Within the Fliegerkorps, the Geschwader (Wing) was the largest single air formation. Each wing was usually composed of three Gruppen (Groups) numbering some 90 aircraft in all—though later in the war a fourth was added—of a single type of aircraft. For instance a Kampfgeschwader (KG) was made up of bombers, a Jagdgeschwader (JG) and Zerstörgeschwader (ZG) single and twin-engine fighters respectively, and a Stukageschwader (StG) dive-bombers. Each independent Geschwader was numbered with Arabic numerals, for example two prominent bomber wings to serve under Luftflotte 5 at various times were KG 26 and KG 30. In addition to these units, so-called Lehrgeschwader (LG), or training wings, existed to test new types of aircraft under operational conditions.

Gruppe. Generally composed of three Staffeln (Squadrons) of nine aircraft plus a headquarters staff of three additional aircraft, a Gruppe (Group) contained 30 machines. Individual Gruppen were designated by Roman numerals prefixing their respective Geschwader. Thus the 3rd Group of the 26th Bomber Wing was III.KG26. Independent Gruppen were not common in the Luftwaffe, but did exist and on occasion made an appearance over Norway, such as Kampfgruppe 100 (KGr 100) in 1940. More commonly, reconnaissance and naval squadrons were also collected into Gruppen and numbered consecutively with an Arabic numeral, which in turn was followed by designation type. Thus the 1st Staffel of the long-range (Fern) 121st reconnaissance group was known as 1.(F)/121.
Staffeln. Typically numbering only nine aircraft, the Staffel was the Luftwaffe's lowest formation and within each Geschwader was consecutively numbered with Arabic numerals prefixing their parent wing. By way of illustration, the 1st Squadron of KG 40 was abbreviated to 1./KG 40.

Note: Although this work follows the traditional practice of translating Geschwader, Gruppen and Staffeln as “wings”, “groups” and “squadrons”, these designations in no way resemble the RAF or USAAF units of the same names in size, composition or function.
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<th>Luftwaffe</th>
<th>USAAF</th>
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<td>Generalfeldmarschall</td>
<td>General (five star)</td>
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<td>General (four star)</td>
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Preface

This present work on the deployment of the Luftwaffe over Norway during the Second World War is unique in a number of ways. In the first instance, although a large body of literature in English, German and Norwegian has been published in the last 50 years on the invasion of Norway (code-named Weserübung), no single work in English exists that attempts to survey the entire panorama of the Luftwaffe’s experience in Norway from April 1940 until May 1945. In attempting to do this, I have cast the discussion within the traditional paradigm of campaign history covering four main components: genesis, planning, operational execution, and consequences. In other words, why did Hitler decide to invade Norway, in what manner did the German armed forces propose to carry this out, how was this actually achieved, and, once accomplished, were the short and long-term objectives of the campaign attained?

Unlike a good number of histories in which the origins of Weserübung are briefly skimmed over as a necessary evil before diving into planning and execution, I discuss the campaign’s causes in some detail in Chapter 1, because to determine the success or otherwise of any endeavour it is essential to understand its initial goals. In this chapter and those that follow, it may appear odd in a history of the Luftwaffe to spend, as I do, a considerable amount of time discussing the role of the Navy. I make no apologies for this. Not only is it clear from the inception of the invasion until the loss of Tirpitz in 1944 that the Navy was the primary mover and shaker in matters Norwegian, it also remained the Luftwaffe’s main operational partner in the theatre throughout the war. The successes and failures of their relationship are a central theme of this dissertation.

Rather than merely dealing with the nuts and bolts of the planning process, Chapter 2 also provides an interesting case-study of Germany’s often ad hoc approach to campaign warfare and illustrates the powerfully destructive influence of inter-service rivalry that thwarted attempts to establish a true supreme theatre commander with authority over all the services involved in 1940, and would characterise Hitler’s approach to making war in later years. In addition to these considerations, the invasion of Norway was groundbreaking in a number of ways as it was the first time that, for example, paratroops were used in war; objectives were secured solely by air power; large quantities of men, equipment and
supplies were delivered to the forefront of battle by air, and the Luftwaffe engaged in large-scale operations over the sea. Given the innovative nature of the undertaking, therefore, the way in which the Luftwaffe proposed to carry out these tasks and the organisational framework under which they would operate deservedly receives a good deal of attention here.

Chapters 3 and 4 are devoted to the campaign itself. Although popular perception would have us believe that the campaign was over within 24 hours, in fact it lasted for nearly a full two months: from 9 April until 8 June. The air campaign over this period has been broken into three distinct phases: first, the initial assault on 9 April until the end of the Second Battle of Narvik five days later, second, the Allied landings in central Norway in the week that followed until their ejection in 2-3 May; and the third and final phase running from early May until 8 June when the Luftwaffe’s attention centred on supporting the isolated German forces in and around Narvik in northern Norway. Within this chronicle are woven recurring threads dealing with the leadership of Milch and his successor Stumpff; the singularly decisive role of Luftwaffe in the first two phases and its declining importance in the last; the significance of the campaign in the evolution of air power as a potentially potent force in maritime warfare; and controversies surrounding the use of aircraft in support of ground forces to name but a few.

One of Hitler's main reasons for invading his Nordic neighbour was to utilise it as a base of operations for the Luftwaffe and Navy against Britain. How well the post-
Weserübung reality measured up to the pre-Weserübung expectations is broadly the focus of the remaining three chapters. Within these, Chapter 5 provides the analytical fulcrum of the thesis. It is here that I explain in some detail why German hopes of using Norway in the Battle of Britain and the Battle of Atlantic were never realised. In particular, the lack of a coherent air-maritime strategy meant Germany entered the war without a force of purpose-built long-range reconnaissance and anti-shipping aircraft. Alongside this analysis the actual involvement of Luftflotte 5 in the war over Britain and the war at sea are examined at length to show the unrealised potential of Germany’s Norwegian conquest. The part played by Hitler, Hermann Göring, and Erich Raeder, plus a number of important bit-part players such as Ernst Udet, Karl Dönitz, and Ernst Heinkel in these proceedings is also examined in relation to the exploitation of Norway in the war against Britain.

If Luftflotte 5’s part in the war against Britain was to prove abortive, the air fleet’s operational strength and fortunes soar for a season against the PQ convoys in the next chapter. In one of the Second World War’s most demanding theatres the Luftwaffe found
itself at the forefront of the war against Arctic convoys. Stumpff's clever use of limited resources and his continual tussle with the Navy over the use of air power in support of the latter's remaining big ships highlight the conflicting demands and constraints facing Lufthflotte 5's commander. Although the assault on PQ 17 revealed what might have been achieved earlier in the Battle of Atlantic if the Germans had had adequate numbers of long-range aircraft and U-boats, German success against this ill-fated convoy was really determined more by the British Admiralty's misguided order scattering the convoy than by any intrinsic advantages held by the Luftwaffe over the enemy vessels. This was a point made abundantly clear by the heavy losses sustained by Lufthflotte 5 for very little gain against the resolutely-escorted PQ 18 convoy.

The seventh and final chapter chronicles the final drawn out gasps of an under-equipped and ailing air fleet attempting to operate against increasingly impossible odds. Stripped of the bulk of its bomber strike force after the Allied Torch landings in North Africa in late 1942 and defensively weakened by the slow withdrawal of fighters to the Reich for Home Defence in 1943, the Luftwaffe in Norway was unequal to the tasks at hand. Lufthflotte 5's role in the loss of Scharnhorst and Tirpitz, the appallingly poor resistance put up against Allied bombers raiding Norway and the final half-hearted efforts against the Arctic convoys following the PQ 17-PQ 18 assaults are charted in the pages of Chapter 7.
Of all the people who had a hand in this thesis I must first thank my loving and long-suffering wife, Sandra, who, over the last few years, has bravely survived the stresses and strains of a husband immersed in academic endeavour. It would be impossible to catalogue the sacrifices made by my beautiful wife in what has truly been a team effort and this completed thesis is a testimony to her supportive companionship and care of our four children. Thanks to Sandra the journey was much more enjoyable and rewarding than I had the right to expect.

Dr. Vincent Orange, as my doctoral supervisor, has been an encouragement from the inception of the idea through to the research stage, then into the “writing up” phase of my work and finally the presentation of the completed work. One could not ask for a better guide and mentor. Vincent’s skilled supervision not only ensured that I kept on track, but he provided a much needed intellectual sounding board for my ideas and a critical eye to my “jewelled prose”.

During the course of my work Dr. James S. Corum, Professor of Comparative Military Studies at the School of Advanced Airpower Studies, Air University, most generously supplied me with large quantities of documents and photos. In addition, Jim’s expert advice on some of my earlier chapters, and his thoughts on what would be my later chapters has been extremely beneficial to the finished work. Jim has been unfaltering in answering any questions and concerns put to him and in 1997 greatly aided my efforts in giving a paper based on the first chapter of this thesis to the Society for Military History, which in turn enabled me to get a good deal of research completed at the United States Air Force Historical Research Agency (USAFHRA) at Maxwell Air Force Base, Alabama.

At the USAFHRA I was well looked after by Colonel Richard S. Rauschkolb and his staff among whom Ann Webb and Archie DiFante were of immense importance in helping a “Kiwi” get as much done in an all too short space of time. Meanwhile, the School of Advanced Airpower Studies provided me with a base camp from which to carry out my research. The Southern hospitality was greatly appreciated and made my brief sojourn in Alabama very rewarding. At the same time as I was engaged in research at the USAFHRA I had the good fortune to meet Nils Naastad, a Lecturer at the Royal Norwegian Air Force Academy, who, then and in later correspondence, offered some very helpful insights into the problems faced by the Germans during the 1940 invasion.

One of the most important assets to my work was a Short-Term Fellowship I was able to take up with the Smithsonian Institution’s National Air and Space Museum (NASM), Washington, D.C. At the NASM my sponsor, and most gracious host, Dr Von Hardesty, Curator, Department of Aeronautics, not only took time out of his own considerable workload to see that I settled in successfully, but along with Michael Neufeld, Curator and the NSAM’s scholarship director, was only too willing to answer my questions and make me feel part (if all too briefly) of what is truly a great “Institution”. Thanks to the support of Dr. Hardesty and the funding provided by the Smithsonian, I was able to research a considerable collection of materials from not only at the Air and Space Museum’s own fine library, but also a number of important repositories in and around Washington including National Archives II, College Park, and the USAF Historical Support Agency. At the former, James Kelling, Archives Specialist, proved indefatigable in helping me in my search for relevant documents amongst National Archive’s extensive microfilm
collection, while at the latter Yvonne Kinkaid and Dr. Diane T. Putney where most generous in aiding one of Vincent’s students a long way from home.

Dr. Horst Borg, the retired Scientific Director of the Bundeswehr’s Militärgeschichtliches Forschungsamt (Military History Research Office), is without doubt one of the most influential contributors to our understanding of Second World War German air power, so it was my good fortune that while he was in New Zealand some four years ago he was kind enough to give a “newcomer” to the field some sound advice and in the years that followed has continued to be most helpful as the thesis progressed. Dr. Borg’s insights and knowledge were gratefully received.

Also important in the formative stages was the direction provided by Dr. Joel Hayward, a good friend and presently a Lecturer in Defence and Strategic Studies at Massey University, who was not only willing to share with me a great deal of his own collected Luftwaffe materials but, having already “cut a track” in this field, imparted some sound advice on research and preparation. I am also greatly indebted to another good friend and fellow thesis writer, Andrew Conway, who, while working on his own magnum opus, gave willingly of his valuable time in order to aid in the editing of this text during the latter part of the project.

At the University of Canterbury a number of persons within the History Department have played a part in this endeavour, in particular Dr. Ian Campbell, the Department’s bursar, who made funds available for me to carry out research, and the successive Heads of Department, Professor W. David McIntyre and Dr. John Cookson, who both encouraged an atmosphere conducive to research and post-graduate work. On a more relaxed level, the collegiality and good sense of humour provided by the “morning-tea crew” of Tim Cooper, Tracy Tulloch, Jean Sharfe, Rosemary Goodyear, and Annie Stuart provided a much needed foil to the more trying aspects of the writing process. In addition to the above a whole host of other people facilitated in the completion of this thesis including: Sebastian Cox, Wing Commander David A. Proven, Dr. Sönke Neitzel, Dr. Christina J. M. Goulter, Brian Hewson, Randy Papadopoulos, Dr. Karl Mueller, Dr. James H. Kitchens Dr Donald F. Bittner, Dr. David M. Glantz, Dr. Richard R. Muller, Henry L. DeZeng, Joel Williams, Greg Alford, Nina B. Anderssen, and Olve Dybvig.

Of course, any errors, omissions or misinterpretations are mine alone.

Adam Richard Antony Claassen
Christchurch, September 1998
Abstract

This thesis tells the hitherto untold story of the Luftwaffe over Norway from the German invasion of April 1940 until the war’s end in 1945. The Norwegian invasion—codenamed *Weserübung*—was an important chapter in the history of the Luftwaffe, as it was the first time in which it had operated as an independent force in a true tri-service campaign involving air, sea and land forces of nearly equal measure. In addition to this, the campaign was groundbreaking in a number of ways as it was the first time that, for example, paratroops were used in war; objectives were secured solely by air power; large quantities of men, equipment and supplies were delivered to the forefront of battle by air; and the Luftwaffe engaged in large-scale operations over the sea. Although the participation of the Luftwaffe was decisive to the success of the campaign and as a turning point in the war showed that sea power without supporting air power was extremely vulnerable to land-based aircraft, *Weserübung* also revealed a number of weaknesses within the German military machine and system, that would greatly hinder the successful exploitation of Norway as a base for operations against the British Isles in the Battle of Britain and the Battle of the Atlantic in the years that followed. Hence, woven through this narrative is a comprehensive analysis of why and how the Germans failed to make the best use of its Norwegian prize as originally anticipated, including, amongst others, the mismanagement of the four-engine bomber programme, the destructive influence of inter-service rivalry, and Hitler’s leadership style.
Chapter 1
Blood and Iron, and the Spirit of the Atlantic

"Nobody can say for certain that our fleet will not anchor in Nordic fiords as protector for instance of Norway"
Wolfgang Wegener 1915

On 24 April 1942, Hitler declared that there had been only two decisive events thus far in the entire war. While many historians may well guess at least one of these, the German “defensive battle” outside Moscow during the previous winter, only a few would discern that the other crucial event the Führer had in mind was “the Norwegian campaign of 1940.”1 If the Norwegian campaign had failed”, he continued during his midday monologue, “we would not have been able to create the conditions for the success of our submarines.” Additionally, without control of the Norwegian coast, strikes against northern Britain and operations in the Arctic against Allied convoys bound for the Soviet Union would not have been possible. Hitler then went on to lambast Germany’s military leaders of the First World War for their lack of “daring and far-sightedness” because, unlike himself, they had not seen the advantages of occupying Norway.

With these words in mind, we might well suppose that Hitler had long planned to occupy Norway, and when given the chance in 1940 was merely following a carefully calculated pre-war plan. Nothing, however, could be further from the truth. In marked contrast to his comments above, Adolf Hitler, Chief of State and, since February 1938, Supreme Commander of the Wehrmacht (Armed Forces), had sincerely desired the maintenance of Norwegian and general Scandinavian neutrality in the unfolding conflict, a fact he repeatedly made known before the war and during the course of its first few months. On 1 September 1939, while German soldiers stormed across the Polish frontier, Hitler’s diplomatic staff in Oslo, Helsinki and Stockholm, were conveying “in clear, but decidedly friendly terms” the German Government’s intention to respect the integrity of the Scandinavian states “in so far as they maintain strict neutrality.”2 In a lengthy speech to the Reichstag on 6 October, Hitler reassured his northern neighbours that “Germany has never had any conflict of interest ... with the northern states”. Furthermore, despite Germany offering them non-aggression pacts, none had accepted, “because they do not feel threatened in any way.”3 This was no orchestrated ruse: as Hitler realised, the Reich had much to gain from continued neutrality on its Scandinavian flank.4 For example, it enabled
German shipping to make use of the Leads, the protected channel running down the Norwegian coast, to transport Swedish iron ore from the northern Norwegian port of Narvik to the Fatherland. Additionally, the Leads provided shelter for blockade-runners and greatly extended their choice of exit points into North Atlantic and Arctic waters. Considering the devastating effects of the Allied blockade of Germany during the First World War, in which approximately 700,000 people died from starvation and hypothermia during the “Turnip Winter” of 1916-1917 alone, it is not surprising that he felt Norway’s continued neutrality was worth encouraging.  

Historically, Germany’s approach was in harmony with the Scandinavian nations’ own policy of avoiding entanglement in continental conflicts. With the exception of Denmark’s loss on the battlefield to Prussia and Austria in 1864, this policy had been successfully pursued since the mid-nineteenth century. Such an outlook was reinforced further by their experiences in the First World War, when their neutrality had been sorely tested. Imperial Germany successfully coerced the Danish government to mine portions of the Great Belt to protect its vital naval base at Kiel. It also received the lion’s share of Swedish iron ore from the rich Kiruna-Gällivare fields and the bulk of Sweden’s industrial exports. The Allies, on the other hand, had pressed the Norwegian merchant fleet into its service, at an ultimate cost of almost fifty per cent of that fleet’s vessels to German U-boats. In the latter stages of the Great War, the Allies also forced the Norwegians to agree to mine their territorial waters off Karmøy in order to complete the British North Sea Minefield. Consequently, at the outbreak of the Second World War, all the Scandinavian nations immediately declared, in the words of Halvdan Koht, the Norwegian Foreign Minister, their wish to maintain “stricte neutralité”.

Yet in mid-December, only two and a half months into the Second World War, Hitler began the planning process that would engulf Norway in the greatest conflict the world has ever known. In the following pages, in order to make sense of this apparently inexplicable change in Hitler’s strategic thinking regarding Norway, I will chart the development of Norwegian entanglement in German military planning up until the month of December 1939, when he made the fateful decision to establish a planning group to investigate occupying this Nordic nation. The purpose of this study is not simply to provide a narrative description of the planning process, but rather to weigh the relative influence of the three main components involved in the decision to invade Norway: geo-strategy, economics, and National Socialist racial ideology. With these in mind, I will examine in detail the importance of major actors (especially Erich Raeder, Alfred Rosenberg and
Vidkun Quisling) and significant events, particularly the relevance of German naval experience in the First World War, the German-Soviet pacts, and the outbreak of the Soviet-Finnish War.

The Spirit of the Atlantic

During the euphoria of late September 1939, Hitler established his headquarters at the spacious Kasino Hotel in the town of Zoppot, overlooking Danzig’s Baltic coastline. Irrepressible in victory, Hitler on the 23rd day of the month, met *Großadmiral* Erich Raeder, the most influential individual in the planning process that eventually led to the decision to invade Denmark and Norway. It was during this meeting with Hitler and *Generaloberst* Wilhelm Keitel, Chief of the High Command of the *Wehrmacht*, that Raeder “broached the question of the measures to be adopted in case the war against France and Britain should have to be fought out to the finish.” Although Hitler clearly still hoped to “drive a wedge” between France and Britain, he discussed the possibility of a “siege of Britain” carried out by the Navy and Luftwaffe. In the following days, Hitler’s intention to strike westward began to take form and on 2 October, at Keitel’s behest, Raeder discussed with his Naval Staff alternative strategies for future German operations. Raeder considered that the best of these options lay with the “siege of Britain” by submarine and air warfare. A siege, however, presented the Germans with substantial difficulties. Apart from the small number of ocean-going U-boats available, the Führer had to be made aware of the need to extend the Navy’s area of operational bases to the north and in particular, Raeder added, of the “possibility of gaining bases in Norway with the object of fundamentally improving our strategic and operational position.” This last concern was not a new idea from a Navy merely under the capricious and expansionist influence of Nazi leadership, but represented the culmination of German naval experience in the First World War and subsequent inter-war planning.

Kaiser Wilhelm II had actually shown interest in annexing portions of Norway in the crisis preceding the 1905 breakup of the Dual Monarchy that had united Norway and Sweden for nearly a century. However, it was not, as the naval historian Carl-Axel Gemzell has pointed out, until the First World War and its aftermath that German military planners seriously began to consider the strategic importance of Norway. This development originated principally from the German naval theorist, Wolfgang Wegener, who systematically attacked what he considered a short-sighted German maritime strategy and
incorporated the idea of German bases in Norway as a fundamental prerequisite for success in a future conflict with Britain.

Wegener’s ideas first found expression whilst serving as an Admiralstab officer with the First Battle Squadron. In a trilogy of private, but widely-circulated, memoranda drafted in 1915, and perhaps inspired by the recent Dogger Bank débâcle, in which the heavy cruiser Bliccher was lost, he pointed out the folly of the current policy of waiting for a decisive battle in the North Sea when the British already controlled the trade routes and were therefore only likely to seek “battle in the open sea with superiority, far from our coasts, without any risk.” Additionally, wrote Wegener, Britain was able to block German naval activity and trade “merely by its geographical position”. Wegener’s solution was to expand Germany’s operational base so that it would be able to use its fleet in the struggle for control of the seas. In addition to occupation of the Skagerrak, Germany would be able to achieve “the world power position of a German fleet” (die Weltmachtstellung einer deutschen Flotte) by the acquisition of bases on the Danish Faeroes Islands and on the French Atlantic coast from which to outflank the British completely. To dominate the Atlantic’s South American sea routes, Wegener suggested the Portuguese Atlantic Islands, the Azores and Cape Verdes. In hindsight this may seem rather grandiose, but in 1915, when a German victory was still on the cards, he envisaged these possibilities being achieved by way of a settlement plan at the successful cessation of hostilities. However, before that happy day, Wegener concluded that Germany must be ready to seize any passing opportunities:

because nobody knows today what political surprises this war might still have in store, nobody can already know today what attitude the Nordic countries will take if the English ravishing at sea further presses them. Nobody can say for certain that our fleet will not anchor in the Nordic fiords as protector for instance of Norway.

As the First World War drew to its close in November 1918, however, it became clear that the German surface fleet had been powerless. In the only major naval battle of the entire war, the Battle of Jutland, Germany won a tactical victory, when it sank 14 British vessels totalling 111,000 tons for a loss of only 11 ships totalling 62,000 tons. Yet strategically Germany was the loser, because Jutland showed that not only could the British win a battle of attrition but, as Wegener had pointed out, Britain, had neutralised the Imperial Fleet merely by its geographical position. Despite rattling its cage in the Battle of Jutland, the High Seas Fleet remained imprisoned, not only by a superior force, but also by its poor strategic position vis-à-vis the British Isles.
Wegener’s work reached a much wider audience in 1929 with the publication of his maritime classic, *Die Seestategie des Weltkrieges* (*The Sea Strategy of the World War*). Going beyond simply pouring scorn on what he called Germany’s “Coastal Navy” (*Küstenmarine*) defending the “dead angle of the dead sea”—that is, German North Sea ports under British blockade—Wegener, now a *Vizeadmiral*, elaborated on the extension of the Fleet’s operational base. From strategically important bases, German naval forces could range against British merchant traffic while defending their own routes in the Atlantic. His suggestions closely parallel those made in his 1915 but with a new heightened emphasis on Norway. In 1915, it had been included almost as an afterthought, but by 1929 Norway featured prominently in Wegener’s thinking.

The North Sea, during the First World War had been, in Wegener’s eyes, little more than a northern European “Caspian Sea”; in which the battle of two navies would be “totally immaterial” to the outcome of the war because not a “single ship in the world’s sea lanes will thereby be forced off its course.” This stifling strategic position could have been broken after the failure of the Battle of the Marne. Instead of accepting the resultant stagnation on the Western Front, Germany should have swung the initiative northward to Denmark and Norway. Reflecting on this possibility, and foreshadowing events that would take place in 1942, Wegener asked:

> what might have been the repercussions for the land war against Russia had we been able, operating from Norway, to interdict the stream of transports and supplies that passed over from the Scandinavian peninsula and through the Arctic Ocean? Much less our influence on overseas trade! Would the neutrals have surrendered so unconditionally to England’s orders and placed at her disposal all their available shipping?

Positions in Norway would, moreover, prevent the British from maintaining their Shetlands-Norway blockade line and force them to “withdraw roughly to the line Shetlands-Faeroes-Iceland”. This situation would have made it extremely difficult for the British to maintain a blockade when considerably outflanked to the north. Nevertheless, he noted that Norway itself would not give the Germans a “conquering” geographical position, but was essential as a jumping-off point to the Shetlands. Along with the Faeroes and Iceland it was here, not Norway, that Germany would take mastery of the North Sea’s northern gate to the Atlantic, a point that would be overlooked in the eventual planning for the invasion of Norway in early 1940 and which became of considerable importance after the British occupation of Iceland in the same year.

Wegener’s work was widely read in naval circles and its themes became the centre of much lively debate. His ideas were often incorporated in officers’ training papers at the
Marine Academy (*Marineakademie*), and the relative merits of his thesis were discussed in numerous articles in naval journals and magazines. Additionally, naval wargames held during the 1920s and 30s consistently indicated that if Germany were to have any influence beyond its short 240 kilometre-long North Sea coastline, it needed to expand its operational bases; and consensus more often than not lay with Norway. Despite Raeder’s long-standing personal dislike of Wegener, the Commander-in-Chief of the Navy was also caught up in the stream of expansionist and offensive ideas, including the acquisition of bases, that characterised this period.20

In speeches given in 1935 and 1937, Raeder acknowledged Germany’s “unfavourable position” and demanded a strategy infused with Wegener’s “spirit of the Atlantic” (*Geist des Atlantiks*).21 For example, in his February 1937 oration on “Basic Thoughts of Naval Leadership”, to a gathering headed by the Führer, and including such Nazi illuminaries as Hitler’s Deputy Führer, Rudolf Hess, and master of propaganda, Joseph Goebbels, Raeder’s thoughts closely followed those of Wegener.22 In typical Wegenerian rhetoric, Raeder pronounced that in any future war “the operational use of the fleet is determined by bases”. It was this very argument, resting on wartime experience and afterwards developed by Wegener and others that Raeder once again presented to Hitler only a month into the new war. On 10 October 1939, when Raeder had an audience with Hitler, he pressed forcefully for the immediate and ruthless implementation of the “siege of Britain” in order to shorten the duration of the war.23 To pursue this objective successfully, Raeder pointed out the importance of obtaining bases on the Norwegian coast to aid submarine warfare and suggested the central Norwegian port of Trondheim.24 To this, Hitler off-handedly replied that he would consider the matter.

Clearly at this point, the German leader was not committed to an occupation of Norway, and evidently still hoped to preserve the Nordic states’ neutrality, despite a ground swell of support from the Navy for improving its strategic position. What would change his mind? The answer lies within a statement Hitler made only the day before his meeting with Raeder, regarding the Scandinavian nations. “Their neutrality, provided no unforeseen circumstances arise, may be assumed for the future”, he declared in this secret memorandum of 9 October 1939, and, moreover, “the continuation of German trade with these countries appears possible, even if the war is of long duration.”25 Although these words held out the promise of continued Norwegian neutrality, within them lay the barbs which would ultimately hook Norway into the conflict. As the Führer had not unreasonably noted, neutrality was conditional on the absence of “unforeseen circumstances”, and tied into
Germany's continued trade with the region. On the one hand, this prospect seemed possible at first, as Western Europe drifted aimlessly on the beguilingly calm waters of the Sitzkrieg; on the other hand, however, gnawing at German confidence was the threat to its vital Swedish iron ore supplies. As early as 2 November 1934, the Führer in a conversation with Hermann Göring, Prussian Minister of the Interior and Reich Commissar for Aviation, considered "a build-up of the Navy... absolutely vital, because it would not be possible to wage war at all if the Navy was unable to protect the ore shipments from Scandinavia." Before detailing the "unforeseen circumstances" that could affect the supply of this material and the relevance of Norway to this, it is necessary to outline Germany's position with regard to this important raw material and the German assessment of threats to it.

Swedish Iron Ore

Since the National Socialists came to power in 1933, Hitler had attempted to progress along a path of rearmament and autarky, because he believed that the prerequisites for a successful future war were a prepared military machine and a Reich self-sufficient in strategically important raw materials. By 1936, however, he had grown impatient with the slow progress towards these dual aims and, in order to hasten Germany's preparedness, the Führer composed one of the Reich's defining documents. Dictated in August at Obersalzberg, the typically rambling memorandum cast Germany in an apocalyptic struggle against Bolshevism and worldwide Jewry—a struggle which it dare not lose, considering the result would not merely lead to another Versailles, but "the final destruction, indeed to the annihilation of the German people." Reflecting on Germany's eternal burden, Hitler stressed the importance of the ruthless subordination of the needs of the individual to the interests of the state. There could be "only one interest and that is the interest of the nation, and only one single view, which is that Germany must be brought politically and economically into a state of self-sufficiency." At the forefront of his mind were oil, rubber and iron ore supplies. In his opinion, "nearly four precious years" had been allowed to slip by and Germany was still completely dependent on foreign countries for these war-winning materials. "Just as we have stepped up the production of iron ore from two and a half million tons to seven million tons," Hitler intoned, "so we could be processing twenty or twenty-five million tons of German iron ore, and if necessary even 30 million." He elaborated on the iron ore problem at length:

It is further necessary to increase the German production of iron to the utmost. The objection that we are not in a position to produce from the German iron ore, with a 20 per cent content, as cheap a pig iron as from the
45 per cent Swedish ores, etc., is irrelevant because we are not in fact faced with the question of what we would rather do but only of what we can do. . . In any case, for a thousand years Germany had no foreign iron ores. Even before the [Great] War, more German iron ores were being processed than during the period of our worst decline. Nevertheless, if we still have the possibility of importing cheap ores, well and good. But the future of the national economy and, above all, of the conduct of war, must not be dependent on this. [Emphasis in the original]

Concluding with a magisterial flourish, he pronounced that not only must the German Army “be operational within four years”, but that the German economy must also “be fit for war within four years.”

Hitler had rightly singled out mineral resources as a weak link in the German economy. Although Germany possessed large reserves of coal, it was lacking in nearly every other important raw material necessary for a modern armaments industry, including chrome, nickel, tungsten, molybdenum, manganese, zinc, lead, copper and tin. Moreover, due to the loss of the rich Lorraine iron-fields to the French at Versailles, German iron ore production had remained below pre-Great War levels well into the 1920s. Additionally, Germany was hampered by the fact that, despite having significant reserves in the Hannover region, its domestic ores had a relatively low iron content, averaging only 30 per cent. This combination meant that Germany could meet only a paltry 20 per cent of its burgeoning steel consumption. Therefore, by far the larger part of Germany’s iron ore requirements—80 per cent—was imported, and, as economic historian Martin Fritz states, of the major nations only Japan and Italy were less self-sufficient than Germany. This over-reliance on imported ores not only strained Germany’s balance of payments but made its steel industry—one of the world’s largest producers of crude steel—vulnerable in the event of war, and therefore a real concern to Nazi planners in the 1930s.

The Four Year Plan attempted to increase Germany’s self-sufficiency in iron ore through the opening of new mines and an increase in the output of old fields. Indeed, these measures were spectacularly successful as domestic output climbed from 7.5 million tons to 14.7 million tons in the period from 1936 to 1939. Production was further bolstered by the incorporation of Austria into Greater Germany in 1938. As a result of the Anschluß, 2.7 million tons of Austrian ore were added to Germany’s total output in 1939 alone. Nevertheless, these remarkable increases did not significantly reduce dependency on imported ore. The reasons were twofold. First, at the same time as raw material production was stepped up, industrial demand was increasing to meet Hitler’s other main requirement: rapid rearmament. Hence, any increase in domestic ore production was offset
by escalating industrial output. For example, the consumption of iron ore in 1938 had increased to 38 million tons: that is, 10 million tons more than in 1936. Second, although the total amount of domestic ore being produced appears impressive, it proved less so when the relatively poor iron content of German ore was taken into consideration. As already noted, the Four Year Plan demanded the opening of new fields, but these often produced a markedly inferior grade of ore. By way of illustration, although the new Salzgitter mine (located east of Hannover and one of the model mines under the Four Year Plan’s drive for autarky) increased its production in leaps and bounds, the iron content of its ore languished around only 20 per cent. Overall, from the latter part of the 1920s until the end of the 1930s, the iron content in German ores fell from an uninspiring 32 per cent to about 27 per cent. The lower quality and more costly iron ore produced by these mines had a detrimental impact on German steel works, resulting in impaired productivity, which in turn, led to lower profits and increased prices for steel. Therefore, despite Germany’s iron ore production increasing nearly one and a half times from 1935 to 1939, foreign imports also increased sharply, if at a slightly lower rate. In the four years from 1935 to 1938, German imports rose from 14 million tons to nearly 22 million tons; of this, the most significant portion was sourced from only one country: Sweden. In 1935, Sweden had accounted for 5.5 million tons of the iron ore imported by the Reich and by 1938 this had grown to 9 million tons.

Sweden was not only the most important source of iron ore for Germany because of sheer volume of iron ore imported, but also because its ore had a very high iron content. The significance of Sweden’s high quality ore can be demonstrated by a comparison with the iron content of the ores produced by other importers. As noted, Germany’s iron content hovered around the 30 per cent mark in the 1930s. Foreign ore, on the other hand, possessed an average iron content of up to 50 per cent. This, however, varied considerably from country to country. The ores of France and Luxemburg had an iron content that ranged from 28 per cent to 37 per cent, while those of Spain averaged 50 per cent. The Swedish ores though, were superior to all others with an iron content of about 60 per cent. In the period 1936-1938, Sweden’s contribution to imports of ore on the basis of quantity was already substantial, representing about 40 per cent of Germany’s total incoming iron ore. However, when its high iron ore content is included in the equation this jumped to nearly 60 per cent of Germany’s imports. Quantitatively and qualitatively, Swedish ores were of great strategic importance to the German war economy: a fact not
unnoticed by military planners, and as the 1930s drew to a close and the likelihood of war increased, their concerns were naturally heightened.

In the latter stages of the Four Year Plan it became increasingly obvious that autarky in iron ore was nowhere close to being attained. Ever conscious of the impending crisis, *Wehrmacht* planners looked anxiously at likely threats to their most important source of iron ore. "The maintenance of Swedish iron ore imports during a war", began a report of April 1939 by the economic staff of OKW, "is a fundamental demand of the *Wehrmacht*." In the grey tones of bureaucratic vernacular, the report calculated that in spite of increasing domestic production, Germany faced a shortfall in requirements of 9.2 million tons of high quality iron ore (that is, ore with an iron content of 60 per cent). In peace-time this was not particularly daunting as any deficiency could be made good by imports. In the event of war, however, OKW's economic staff pointed out that Germany would probably lose its imports from Spain and France and their respective colonies, and from Luxembourg; resulting in an import shortfall of 11.6 million tons.

A realistic appraisal of Sweden's ability to make up this difference was not encouraging. The assessment took into account the likely loss of the northern Norwegian port of Narvik as a conduit-point during hostilities and the limited ability of the Swedish rail network to transport the ore that would normally pass through Narvik to other Swedish ports. Therefore, in addition to 3 million tons from central and southern Sweden, the Germans could expect only 2.5 million tons from the northern Swedish port of Luleå, giving a total of 5.5 to 6 million tons. To this equation, the *Wehrmacht* added the estimated mobilisation requirements of 14 million tons for the beginning of 1939 and 9 million tons for 1940. The result was an expected import shortfall in time of war of 8.5 million tons in early 1939 and of 3.2 million tons in 1940. Although the latter figure was admittedly an improvement, the *Wehrmacht* emphatically stressed that "even a shortfall of 3.2 million tons of ore was not bearable for the German war economy during a war lasting more than half a year."

This report echoed another of 22 December 1938, which concluded that unless a two to three year stocking-up period could be achieved, "the iron ore problem can only be brought about by military intervention during a war." Both reports recognised that, because the 5.5 to 6 million tons of iron ore from northern and central Sweden remained the "sole possibility for supplementing Germany's iron ore in a time of war", it was vitally important that they be protected at all costs.
Initially, many planners saw the Soviet Union as a potential threat to Germany’s supplies from Sweden. For example, on 14 January 1939, a concerned War Economy Office (Wehrwirtschaftsstab), requested an assessment of the threat posed by a build-up on the Soviet Union’s Arctic Kola Peninsula to “German iron ore imports from Sweden”.47 The reply prepared by the Luftwaffe on 25 January soberly confirmed that the Soviet Union had indeed made great efforts to build up its fleet and air bases on the peninsula.48 Moreover, the Luftwaffe saw not only deep incursions by Soviet aircraft as a threat, but also that the deployment of relatively small numbers of paratroops and airborne forces could bring “about a complete disruption to iron ore exports for a considerable duration.” By way of illustration, the capture of the Åland Islands, which form a natural gate to the Gulf of Bothnia between Sweden and Finland, would effectively sever Swedish iron supplies via the Baltic. Also, the insertion of Soviet airborne forces against the major northern Swedish power station at Porjus would bring iron ore production to a grinding halt, especially if carried out in the long winter months of perpetual darkness.49 A minor, but nonetheless significant threat in the eyes of Luftwaffe analysts, was the possibility of Soviet airborne operations against the rail-line linking the northern Swedish iron ore mines with Narvik. Admittedly, the mountainous terrain—particularly in the western part of the region—would make it difficult for the Red Army to extract its forces once operations had been concluded, but the fact that the region was sparsely populated and that the line was the Lynchpin of ore transportation in the north made it a prime target. In August 1939 the concerns of the War Economy Office and the Luftwaffe were laid to rest, at least for the next two years, by the signing of the German-Soviet Non-Aggression Pacts. Ironically, these very same pacts, which eased German insecurity in eastern Europe, brought about a fresh threat to Swedish ore supplies, this time from Britain and France in the West. Their target was Narvik.

The German-Soviet Non-Aggression Pacts and Narvik

Although ideologically vehemently opposed to each other, Hitler and Stalin found common ground in their mutual deep-rooted hatred of the Versailles settlement; in particular, the establishment of an independent Poland at the end of the Great War. The Non-Aggression Pact of 23 August 1939 established a framework for the dismemberment of the Polish state and, as laid out in supplementary secret protocols, gave both parties free rein in their own spheres of influence without fear of intervention from the other party.50 The rough dividing line separating the two signatories followed the Polish Narev, Vistula and San rivers.
Consequently, the eastern portion of Poland and the Baltic States, excluding Lithuania, but including Finland, fell within the Soviet sphere.

This agreement and the subsequent German-Soviet Treaty of Friendship, Cooperation and Demarcation of 28 September 1939, not only tidied up the eastern region but threw Finland to the wolves. The Finns remained in the Soviet sphere while Germany secured a sizeable slice of Poland between the Vistula and Bug rivers in exchange for Lithuania. Doubtless, Germany potentially could lose some of the valuable commodities it imported from Finland, but these would be more than compensated for by the raw materials that would flow into Germany from the Soviet Union under the economic provisions of the protocols. More importantly, bolting the Reich's back door allowed Hitler to concentrate his attentions westward.

Indirectly, the agreements reached between the two parties also facilitated negotiations for a naval base on the Soviet Union's Arctic coast near Murmansk. Barely a month had passed since the signing of the first agreement when Raeder informed the Führer that the Navy would like the use of Soviet bases, especially at Murmansk. The outcome of talks between the Germans and Soviets resulted in the offer of a base in Zapadnaya Litsa Bay on the Murman Coast in mid-October 1939, which was subsequently codenamed: Basis Nord (Base North). Located near Murmansk, the base appeared well situated for the Navy's long-term goal of outflanking Britain, and unlike the other Soviet bases, Germany could do "whatever it wished" there, including the servicing of pocket battleships, submarines and supply vessels. However, many of the concerns expressed by naval staff at the time regarding the suitability of the base, such as its isolation and lack of adequate communication and logistical support were borne out during the following year. In addition to the extreme difficulty experienced in maintaining adequate radio contact with Germany, materials and supplies had to be brought in almost exclusively by sea because the base had no rail access. Moreover, as a base for naval surface vessels and U-boats, the lack of adequate repair facilities hindered its operational usefulness in the war against British shipping. Although a failure in terms of its workability, Basis Nord did show the German Navy's continued insistence on improving its strategic options and if this base proved unsuitable, all the more reason to look towards Norway for bases that would meet its needs. Likewise, the securing of a Soviet base illustrated the ability of the Germans and Soviets to work together in accordance with the secret protocols and labour towards the implementation of their cosy agreement—the division of Europe.
Yet what neither Hitler nor his Bolshevik partner in crime were able to foresee was Finland’s intransigence in the face of Soviet coercion and German desertion. Although by 10 October all three Baltic states had been enveloped into a Soviet “security zone” in accordance with the secret protocols, Finland’s membership was by no means a fait accompli. In fact, Finland’s failure to give in to Stalin’s territorial demands ultimately led to a Soviet invasion along the Finnish-Soviet border on the last day of November 1939. Remarkably, the small Nordic nation, although militarily outnumbered by three to one, thwarted the Red Army at every turn by taking advantage of the thick snow which blanketed the deep tree-club gullies and frozen lakes making up most of the border region. Highly mobile and resourceful Finnish forces brought the Red Army, demoralised by Stalin’s purges of senior officers, to an icy halt in nearly all sectors of the front.

The outbreak of war in the Far North had repercussions for Norway, because of the threat of an Anglo-French landing via Narvik. As already noted, German concern regarding its supply of Swedish iron ore had, prior to the signing of the non-aggression pact with Stalin, centred on the Baltic shipping routes. Once these were secured, the focus of German concern shifted to Narvik. In December 1939, in a lengthy report on “The Iron Ore Supply of Greater Germany during the Present War Entanglement”, the Institute for World Economics (Institut für Weltwirtschaft) drew attention to the significance of Narvik. It suggested that securing the sea route between Narvik and German harbours was an important prerequisite for ensuring “trouble free” ore imports to Germany, because the predominant share of Germany’s Swedish iron ore supplies came via Narvik.55 Neither Gåvle nor Oxelösund, on Sweden’s central and southern coast, had the “favourable handling facilities” of Narvik, while, on the other hand, the northern port of Luleå was frozen during the winter months between December and April. Consequently, Narvik, on Norway’s ice-free north-western Atlantic coast, handled about 50 per cent of Germany’s ore imports, and these reached the Reich’s home ports via the Norwegian Leads despite the proximity of Britain and the supremacy of the Royal Navy.56 This narrow stretch of water allowed German freighters to snake their way between the Norwegian coast and its numerous outlying islands all the way from Narvik to the safety of the Skagerrak without leaving Norwegian territorial waters. Yet the tenuous nature of the link between Narvik and German ports was laid bare in the fallout from the Soviet-Finnish war because the significance of controlling northern Norway, and thus the bulk of Germany’s Swedish iron ore imports, was not lost on Allied planners—especially Winston Churchill, First Lord of the Admiralty.
Norway in Allied Considerations

In the first few weeks of the Second World War, Churchill put a proposal before the British Cabinet which called for the laying of mines in Norwegian territorial waters.\textsuperscript{57} This action—repeatedly promoted by the First Lord and eventually carried out on the eve of the German invasion in 1940—would force German ore-laden freighters into international waters to risk capture or sinking by the Royal Navy. Severing the main iron ore artery leading to the Reich's industrial heart would, he believed, have a paralysing effect on Germany's military capabilities, especially if carried out in winter when ice closed the Gulf of Bothnia to shipping. "Nothing would be more deadly . . . to the German war-making capacity, and to the life of the country", enthused Churchill late in November 1939, "than to stop for three or even six months" ore exports to Germany.\textsuperscript{58} In short, controlling the Leads would place Britain's foot on the throat of the German ore supplies. Aggressive action of this nature though, had to be weighed against the loss of respect Britain could incur—especially from the United States—by breaching Norwegian neutrality. As Lord Halifax, Britain's Foreign Secretary, wondered: might not the advantages of stopping the flow of iron ore to Germany via Narvik be offset by distancing Britain and France from their potential war-winning partner?\textsuperscript{59} However, the outbreak of the Soviet-Finnish war on 30 November pushed these concerns aside, because in the interests of aiding a small neutral nation, the British and French could justify sending a force to Narvik and then on by rail to secure the Gällivare orefields. "Thus, and with a little luck," as the British historian David Dilks put it, "a small nation could be defended, morale uplifted, neutrals emboldened, and the stalemate broken and Germany thwarted."\textsuperscript{60}

Needless to say though, if Britain had its raison d'\'état for action in Norway so did Germany. Not only would securing Norway protect Germany's shipments, but it would also stop the considerable amount of vital raw materials and foodstuffs Britain received from the Baltic region via Norway. Notwithstanding the fact that this latter point barely receives a mention in the vast majority of analyses of the Norwegian campaign, German naval staff in this period were acutely conscious of its implications for their "siege of Britain."

In late October—at the same time as British intelligence was evaluating the significance of German imports of Swedish iron ore—the German naval attaché in Stockholm reported that twelve British iron ore steamers had left Narvik, no doubt bound for British ports. Even though Britain was not as heavily dependent for its survival on the
products of the Scandinavian and Baltic nations as Germany, the movement of goods from
this region to the British Isles was a significant factor in the war against British and French
merchant traffic. In this period, the German Navy was receiving a "large number of
reports" which revealed that goods from Finland, Estonia, Latvia, and Lithuania were being
shipped to Sweden, and from there transported by rail to the Norwegian port of Bergen or
Sweden’s southern port of Gothenburg for "transhipment to Britain." Exports from the
Baltic States to Sweden and Norway", continued a 13 October entry in the naval war diary,
"have definitely increased absolutely out of all proportion to peace-time traffic.” That these
goods were destined for Britain was confirmed by the German legation in Stockholm, the
Navy’s own attaché, and even the Swedish press, which, for example, reported that the
exchange of goods between Sweden and Latvia had reached "a volume never hitherto
expected.” The goods transported via this route ranged from food products (such as
Latvian butter and bacon); to raw materials, such as Swedish/Norwegian ores and Finnish
pit-props, which the Germans believed were vital to the British coal mining industry. These
props were carried overland from northern Finland to Narvik for shipment to Britain. In
mid-November, in an attempt to plug this gap, the German Navy sent its remaining U-
boats—a mere handful—to operate against the "northern trade routes from Murmansk and
Narvik." Nevertheless, this northern supply conduit to Britain was particularly difficult to
sever, because the British, like the Germans, made full use of the lengthy Norwegian
Leads.

Fully aware of this dilemma, Großadmiral Raeder once again brought Norway to
the Führer’s attention on 8 December 1939. In his discussion on economic warfare Raeder
reiterated the importance of Norway:

Transport via Sweden and Norway over Trondheim to England is extremely
active. Points of departure from the Norwegian coast are very numerous and
therefore difficult to control. It is very important to occupy Norway.

While Hitler had let matters drift during the months of October and November hoping that
Norwegian neutrality could be maintained, events were pushing the two themes discussed
so far—geo-strategic and economic—into one great confluence. As noted, the Navy had
initially seen the acquisition of bases in Norway in terms of improving the "strategic and
operational position" of Germany vis-à-vis Britain. Now, in addition to this, the Navy and
elements of the Wehrmacht considered that military operations in Norway were essential to
maintaining Germany’s vital iron ore supplies and blockading the British Isles from its
Scandinavian and Baltic sources of raw materials. Moreover, they feared that these
possibilities would be frustrated should the British and French occupy Norwegian bases
under the guise of aiding Finland. Clearly, as Raeder had discussed with Admiral Carls, Naval Commander Baltic, in early October—even before the outbreak of the Soviet-Finnish war—Germany needed to look at the “possibility of forestalling such an action.” All that was required to do this was to persuade Hitler, who had been relatively ambivalent until early December, to Raeder’s urgings for operations on Germany’s Nordic flank. Not only did the outbreak of the Soviet-Finnish war on 30 November and the threat this posed to German interests in the north bring about a sense of urgency, but in the second week of December Raeder was introduced by Alfred Rosenberg to an unlikely ally who aroused the Führer’s interest: Vidkun Quisling.

Nordic Blood

Quisling was the leader of the Norwegian *Nasjonal Samling* (National Union Party)—a pale imitation of the German Nazi Party. Despite being a small and electorally insignificant participant in Norwegian politics, Quisling was the *protégé* of Reichsleiter Alfred Rosenberg, the Nazis’ so-called “philosopher” and head of the *Außenpolitisches Amt der NSDAP* (the Foreign Policy Office of the Nazi Party, as distinct from the traditional Foreign Office of the German state: the *Auswärtiges Amt*). Rosenberg, who had been born in Reval (now Tallin), Estonia, of Baltic Germanic parentage, had fled Moscow for Munich during the Russian Revolution in 1917. For Rosenberg, who saw history primarily along racial lines, Scandinavia was an integral part of Germany’s Nordic bulwark against the Slavic and Asiatic peoples of the east. In one of the more popular attempts to systematically synthesize the divergent themes of National Socialism—Rosenberg’s bestseller the *Mythus der 20 Jahrhunderts (The Myth of the Twentieth Century)*—the Nazi ideologue saw two alternatives for Europe: either a racially impoverished “Franco-Jewish pan-Europe” or one in which Germany, bolstered by a second league made up of the “Scandinavian states and Finland” would be “the central power of the continent.” These nations would “secure the north-east”, while Britain safeguarded the west and overseas in the places where it was required to do so in the interests of “Nordic man.” There will be “a German-Scandinavian block whose aim will be . . . the prevention of the formation of a Mongolian threat in the East.”

The *Außenpolitisches Amt*, established in April 1933 by the Führer, was designed to focus its attention on groups inclining towards National Socialism in states bordering the Soviet Union in order to create an isolating ring (*Isolierungsring*) around Germany’s Bolshevik enemy. Of these nations, the Scandinavians were in the first rank. However,
because of the strong pro-Anglo-Saxon bias that had existed in Scandinavia since the end of the First World War, Rosenberg set his *Außenpolitisches Amt* the task of wooing these nations through closer cultural relations. To this end, Rosenberg’s *Außenpolitisches Amt* absorbed and continued the work of the fledgling *Nordische Gesellschaft* (Nordic Society) founded in 1921 by a German businessman in Lübeck, to rekindle German cultural ties with its Nordic neighbours. The means by which Rosenberg tried to achieve this, and his success or otherwise, can be gauged from the *Außenpolitisches Amt*’s most visible cultural event: the yearly conferences of the *Nordische Gesellschaft* held in picturesque Lübeck, on the Baltic coast.

For example, in the summer of 1935 the programme for the “Second Convention of the *Nordische Gesellschaft*” (from 23 to 30 June) began on Monday with “Youth and Sport” activities, which included gymnastic groups from Denmark and Sweden; this was followed on Tuesday by Thilo von Trotha—Rosenberg’s most able assistant—who addressed the subject of “Tradition and Art”, Wednesday saw not only Rosenberg himself talking on the subject of “The Rebirth of the Nordic Concept” (*Die Wiedergeburt des nordischen Gedankens*), but also the beginning of the three-day “Nordisches Musikfest” which included a suitably Nordic-Germanic mix of works from Brahms, Sibelius, Beethoven, and Nielsen. That this cultural extravaganza in Lübeck was not all that it appeared to be was only too readily appreciated by many Scandinavians.

One of Oslo’s newspapers, *Dagbladet*, gives a glimpse of how at least some Norwegians perceived the activities in sunny Lübeck. While the conference’s Thursday itinerary called for an innocuous introductory concert by young Nordic artists, followed by Nordic folk dancing—Thursday’s edition of the *Dagbladet* drew a more sinister picture by pointing out that this “propaganda-institute” was led by none other than the leader of the Nazi SA in Kiel, Hinrich Lohse. Of course, this confirmed the belief held by some that the *Nordische Gesellschaft* in Lübeck was nothing more than a “National Socialist propaganda undertaking”, which served as the connecting link between National Socialists in Germany and those in the north, and as a “subtly disguised propaganda institute for fascist ideas.” Regarding the key-note speaker at the conference, Alfred Rosenberg, the World-view Dictator (*Weltanschauungsdiiktator*), the writer informed the reader that he was perhaps the most radical champion of German expansion in the East and to this end, ardently worked to achieve a “Nordic-German alliance.” That this is not an atypical assessment of the *Nordische Gesellschaft* is supported by the fact that of the 750 to 800 people who attended in 1935 only 96 were from Scandinavia. Moreover, at the previous year’s conference all
the Nordic nations snubbed the event by not sending official representatives, much to the chagrin of Rosenberg. The *Außenpolitisches Amt* though, was not the only Nazi agency actively seeking to infiltrate Scandinavian society.

As Rosenberg’s star began to descend and effectiveness of the *Nordische Gesellschaft* declined in the wake of Trotha’s death in 1936, the *Außenpolitisches Amt* had to contend with other ideologically-driven organisations muscling into Nordic affairs. These included the *Nordische Verbindungsstelle* (Nordic Liaison Office) of Goebbels’ Propaganda Ministry and the *Auslandsorganisation der NSDAP* (Organisation for Germans Abroad). Added to this clutch of competing Nazi agencies was Heinrich Himmler, the *Reichsführer SS*, who declared to a group of his high ranking officers in early 1938 his intention to man the *SS-Standarte Germania* (the “Germania” element of the SS police forces) solely with “non-German Germanic people”. Furthermore, once these Nordics had completed their service and returned to their home nations—spreading the ideology of National Socialism—Himmler believed they would provide the material for the “Führer to create a greater Germanic Imperium, a pan-Germanic Reich, the largest Reich that ever has been established by mankind and the largest the globe has ever seen.” Yet, despite the rhetoric and the obvious effort devoted to infiltrating and influencing Scandinavian nations throughout the 1930s, all the competing bodies were unable to make any significant inroads into bringing their Nordic neighbours politically closer to Germany. Only in the last frantic year of the decade did it appear that some success might be achieved in Norway.

Despite the jostling between these contending groups, it was Rosenberg’s *Außenpolitisches Amt* that could claim to have bagged the Norwegian prize. Although Rosenberg had to admit that he had failed to have any substantial success in Denmark and Sweden, he boasted of an association within Norway which could be based on “Greater Germany ideology”. Both the Nazi ideologue and Quisling shared many fundamental beliefs. Quisling, like Rosenberg, had had first-hand experience of Russia, having been an eyewitness to the Russian Revolution and an aid-worker there with the League of Nations, and had developed a strong racial explanation for the rise of Bolshevism. Like his German counterpart who held that “originally Russia was the creation of Vikings”, Quisling reminisced that he had often seen “really fine types in Russian villages—men who remind one of the best type of peasant in the Norwegian highlands, and sometimes have a Viking air about them.” However, both concurred that an adulteration of this Nordic stock in Russia by an Asiatic-Slav movement led by Jews had taken place. Quisling believed that “the sharpest antagonism in the world today, especially, perhaps, in my own country of
Norway and in Germany, amount in the last resort to a duel between the Nordic-European principle and the Asiatic-Oriental principle, i.e. Bolshevism.82 “When, however, the truth comes to be realised that Bolshevism is a conspiracy against Western civilisation of the Nordic type”, Quisling proclaimed, drawing the threads of his argument together, “the remedy . . . will be found in a closer cultural, economic and political co-operation between those peoples which are the main supporters of Western civilisation.” He concluded that a “Northern Coalition” of these Nordic supporters, including the Scandinavian countries, Holland and Flanders, the British Empire, Germany, and the United States would “render innocuous any Bolshevist combination”.83

Given the ideological similarities between the two men expressed in works published within a year of each other at the beginning of the 1930s, and the obvious aping of the German National Socialist party by Nasjonal Samling, one might assume that the Nazis would have actively courted Quisling’s fascist party soon after the birth of the Third Reich. Nevertheless, nothing could be further from reality, and the reasons for this lie at least partially with the insignificance of Nasjonal Samling in the Norwegian parliamentary system. At its height of electoral support in the 1936 general election, the party secured a miserable 1.8 per cent of the vote—insufficient to gain a single seat in the parliament—and it was downhill from this peak thereafter.84 Given the strong historical link between parliamentarianism and nationalism associated with the struggle for Norwegian independence, it is hardly surprising that Nasjonal Samling’s fascist anti-parliamentary platform did not have the same populist appeal that it did in other European countries.85 In addition to this, the party was facing an uphill battle against the middle-classes’ general affinity with Britain rather than Germany. In short, Quisling’s party did not represent a credible entity in Norway. It is, therefore, not surprising that Nasjonal Samling had to fight for any recognition from its disinterested big brother in Germany.

It is difficult to determine exactly when Rosenberg first became aware of Nasjonal Samling, or came into contact with Quisling. Clearly in the early 1930s he knew of Quisling because of the latter’s tenure as Norway’s Minister of War (as a member of the Peasants Party), and it appears that at least by 1935 Rosenberg had heard of Nasjonal Samling. Nevertheless, although Rosenberg after the successful occupation of Norway in 1940 alluded to a lengthy association with this political fighting group “taken by the idea of a Greater-German Community”, he notes that it was not until the winter of 1938-39 that the political pretender was visited by a member of the Außenpolitisches Amt.86 Hence it was only belatedly in 1939 when the European political situation—as Rosenberg euphemistically
noted—"came to a head", and after Quisling made an appearance at the annual conference of the *Nordische Gesellschaft* in June, that *Nasjonal Samling* had a look-in with Rosenberg. Using the connections of a Norwegian businessman living in Dresden, Quisling met with Rosenberg in the summer of 1939. At this meeting, he successfully secured funding for *Nasjonal Samling* from the Nazis. In December, Quisling once again appeared in Berlin, and by this time his importance was growing in German military circles as naval staff pushed for action in Norway to secure bases for the "siege of Britain" in order to pre-empt any Anglo-French attempt to cut off Germany's vital iron ore supply. Quisling met with Rosenberg and Raeder in the second week of December, and both the "philosopher" and the sailor were able to successfully turn Quisling's visit to their own ends.

On 11 December, Raeder listened intently to Quisling's description of the situation in Norway, and heard much to his liking. The following day he made his report to the Fuhrer. In his summation to Hitler, the *Großadmiral* repeated the discussion of the previous day, including Quisling's claim that the Norwegian government, under the "influence of the well-know Jew [Carl] Hambro", had signed a secret agreement with Britain regarding a possible occupation of Norway. Consequently, there was a "very real danger that Norway may be occupied by the British, possibly soon." Quisling's alternative was a *coup d' état* supported by officers in the Norwegian army and co-conspirators working at strategically important facilities, such as railways, and if needed, Germany would provide the military assistance to complete the job. "It must be made impossible for Norway to fall into British hands", Raeder stressed, because "this could be decisive for the outcome of the war." Once Norway was lost, Sweden would fall prey to British influence, and if the war was extended into the Baltic, German hopes of playing a part in the war of the Atlantic would be gone. Having laid out this grim prospect, Hitler agreed that "the occupation of Norway by Britain was unacceptable", and decided that he should speak with Quisling himself, in order to take his own measure of the man.87

The would-be Norwegian dictator met with the German Führer twice during the following week.88 It was in this crucial third week of December that Hitler took his first tentative steps towards invading Norway. Although at both meetings he repeatedly stressed that he preferred Norway—and in fact the whole of Scandinavia—to remain neutral because he did not wish to enlarge the theatre of war, he was not prepared to sit idly by and allow the enemy to further "throttle" (*Abschmierung*) and threaten the Greater German Reich.89 In the event that this should be the case he would have no other alternative but to "arm against such actions." Hitler promised to provide financial backing for Quisling's movement to
combat the increasing pro-British propaganda of the enemy. More significantly, he commissioned a small staff to carry out an investigation on “how one might occupy Norway.”

It was at this point that Hitler moved, if somewhat falteringly, from strict adherence to the idea of Nordic neutrality to including Norway in his military considerations. To discover how much this decision centred on racial ideology and Nordic affinity—as opposed to the geo-strategic and economic factors already detailed—it is useful to first appraise Hitler’s world view (Weltanschauung) with regards to the Nordic race and Scandinavia.

That Hitler was interested in the iron ore mines of Sweden is in little doubt. However, a more accurate picture of his thinking on matters “Nordic” can be gleaned from Mein Kampf and, more importantly, Hitler’s so-called Zweites Buch (Second Book). In his first work Hitler had comparatively little to say on future foreign affairs and even less to say on Germany’s relationship with its Scandinavian neighbours, because in the mid-1920s, when he was still far from the corridors of power, his ideas on the subject were still in embryonic form. Nevertheless, he certainly believed that Nature did not want “a higher race to intermingle with a lower one”, because history shows “with startling clarity, that wherever Aryans have mingled their blood with that of a lower race the result has been the end of the people who were the standard-bearers of a higher culture.” Germany should avoid at all cost the corruption of its German racial stock by a Jewish adulteration of its blood and take note of how, through immigration, French blood was becoming “progressively negroid.” Hitler lamented that, should the German spirit ever be forced to make its contribution to civilisation through individuals under foreign rule, they would do so until finally, the “last residue of Aryan-Nordic blood would become polluted or obliterated.” This rather isolated reference to Nordic blood was developed more fully in his Zweites Buch, written in the spring and summer of 1928, but not published until 1961.

In a similar vein to Rosenberg and Quisling, Hitler claimed that since the time of Peter the Great it was the “many Germans (Balts!) who formed the skeleton and brains of the Russian state.” Nevertheless, as the Nordic blood element waned and the Slavic waxed ever stronger in Russia, their lack of commonality became evident. For example: “if as a test of the two spiritual natures we were to take a purely Nordic German, from let us say Westphalia, and place a purely Slavic Russian opposite him, between these two representative peoples an infinite gulf would open.” Now, however, the purity of German blood itself was under threat. “The German people”, Hitler bemoaned, “will slowly descend to the level of an equally inferior race and hence to that of an incompetent and worthless
people”, because of the “bastardisation systematically carried out by the Jews”, and because it “also lets its best blood bearers be taken away by a continuation of emigration.” Germany could learn from the United States which had through its vices brought about the slow elimination of their most racially valuable element, the “Nordic-blood bearer”; which he later described as being made up of the “Scandinavians, that is, Swedes, Norwegians, further Danes, then Englishmen, and finally Germans.” Additionally, permanent emigration from Germany often took away the “boldest and most resolute”, and, “these above all, like the Vikings of the past, will also today be bearers of Nordic blood.”

It may well be that the obvious strong similarities evident in the Weltanschauungen of Hitler, Rosenberg and Quisling with regard to “Nordic blood-bearers” and the desire to “tie Norway’s fate to that of Greater Germany as the new centre of strength of a nordic-germanic . . . community”, eased the way for the meetings with Hitler. Yet there is no evidence to suggest that this was the fundamental reason for beginning the planning process for the occupation of Norway. All surviving documents surrounding the meetings of December, including those of the ideologically-driven Außenpolitisches Amt, barely make reference to racial kinship as a motivating force or justifying reason for the Führer’s decision. Rather, it was the complementary assessment of Quisling by the militarily-minded Raeder and the emphasis the Großadmiral laid on strategic matters which led to Hitler’s meeting with the Norwegian fascist. In fact, once these meetings were under way it became clear that Hitler’s decision to consider violating Norwegian neutrality was based on what he had called in early October 1939 “unforeseen circumstances”.

At the outbreak of the Second World War, Weizsäcker’s memorandum to the German legations in Norway, Sweden and Finland had stated that Germany would respect the Scandinavian nations’ “integrity in so far as they maintain strict neutrality.” Yet, he had added, “we would naturally be compelled to safeguard our interests”, should a breach of Norwegian and Swedish neutrality by third parties take place. What made Hitler sit up and take notice in December 1939 was the possibility of just such a breach of Norwegian neutrality, namely, Anglo-French intervention in Norway under the guise of aiding Finland in the Soviet-Finnish war.

The analysis above reveals that this threat posed to Germany’s “interests”—in particular its iron ore interests—forced Hitler away from a relatively hands-off approach to Norway toward direct action which coincided with Raeder’s naval demands, Rosenberg’s ideological-political aims, and Quisling’s self-serving political aggrandisement. Of these
three, it was Raeder’s arguments, bolstered by Quisling’s own claims of imminent Anglo-French operations, which were the most compelling and corresponded closest to Hitler’s own thinking at the time; that is, geo-strategic and economic, rather than ideological. If Britain were able to establish itself in Norway it would not only be able to sever ore shipments to Germany, and bring pressure to bear on Sweden, but it could also extend its operations into the Baltic. On the other hand, if Germany were able to occupy Norway first, Hitler realised that he would not just kill two birds with one stone, but a veritable flock. Economically, it would secure Germany’s iron ore shipments, and provide a firm grasp of the Baltic, with access to all the goods that had previously gone to Britain. On top of thwarting Britain’s attempt to outflank Germany, Hitler could also do his own outflanking by providing the Navy with much-needed bases for the “siege of Britain.” Overall, the case for securing the Nordic flank appeared very strong, and this twin geo-strategic and economic focus would be reflected in the preamble of Hitler’s war directive of 1 March 1940 for Weserübung:

The development of the situation in Scandinavia necessitates the commencement of preparations for the occupation of Denmark and Norway by formations of the armed forces (Fall Weserübung). This would anticipate English action against Scandinavia and the Baltic, secure our supplies of iron ore from Sweden, and provide the Navy and the Luftwaffe with the expanded bases for operations against England.105
Chapter 2
Planning for Weserübung

"I cannot and will not begin the offensive in the west before this affair has been settled." Adolf Hitler, 21 February 1940

Both Hitler and Raeder described the invasion of Norway as one of the “cheekiest operations” in recent history which broke all “the rules of naval warfare.” Yet as the Führer and his naval commander brooded over maps of the elongated and deeply fiorded Norwegian coastline, they both agreed that the brazen audacity of the proposal was its greatest strength. Under the very noses of the Royal Navy’s mighty juggernauts, the German invasion of Norway would be almost wholly contingent upon surprise and speed if it was to have any hope of success. Therefore, given that the Norwegian Blitzkrieg was dependent on the rapid deployment of forces over a lengthy operational theatre, German planners immediately saw that this could only be achieved by delivering the initial assault troops by fast men-of-war and the aircraft of the Luftwaffe. Yet, although much is known of the high price paid by the German naval forces, and even the heroic efforts of the army in northern Norway, the Luftwaffe’s story remains little-known. Nevertheless, the invasion of Norway was the first German campaign in which the Luftwaffe was less the handmaiden of the German Army—that is, merely playing a supporting role—and more an equal partner among the three services in achieving final success. In aerial assaults by paratroopers and airborne forces, forays against threatening British naval vessels, a massive airlift operation, and logistical and tactical support of far-flung German ground forces, the men of the Luftwaffe, alongside those of the Army and Navy, passed (in Hitler’s view) “into history as the best representatives of the highest German soldiership.”

In order to make sense of the Luftwaffe’s pivotal role within the framework of this tri-service campaign, it is essential to examine the forces and events which pushed German preparations forward. This can be split into three distinct phases, beginning with the introductory planning phase in late December 1939, ultimately producing Studie Nord (Study North); followed by an intermediate phase involving the deliberations of Kapitän Theodor Kranke’s staff in early February 1940; and culminating in the final phase initiated by the Altmark incident in mid-February, resulting in the appointment of General der Infanterie Nicholas von Falkenhorst as overall commander of the campaign. I will follow
this with an examination of how the Germans planned to carry out the invasion with special emphasis on the role of the Luftwaffe, crucial to the success of the Norwegian Blitzkrieg.

Quisling’s Abortive Initiatives

Adolf Hitler’s order of 13 December 1939 to establish a “small staff” to carry out an investigation of “how one might occupy Norway” set political and military wheels in motion for tentative planning work. “In order to counter the increasing enemy propaganda activity,” noted a memorandum prepared by the Außenpolitisches Amt of the National Socialist Party, “the Führer promised Quisling financial assistance” for a “Pan-Germanic movement.” Accordingly, Alfred Rosenberg’s Außenpolitisches Amt retained oversight of Norwegian political activity. Expenses, though, were to be met by the German state’s Foreign Office. In early January 1940, during a meeting attended by Rosenberg and Reichsaußenminister Joachim von Ribbentrop, both men agreed that a sum of 200,000 gold marks—made in several separate payments—would be made available for Vidkun Quisling’s activities in Norway. As with all enterprises involving Norwegian “affairs”, the two instalments had to be delivered to Quisling under the greatest secrecy, and in the Foreign Office (Auswärtiges Amt) only one senior official (other than Ribbentrop, of course) was made aware of this clandestine arrangement.

Not only did the Germans establish close “official” liaison with Quisling, but the Norwegian himself reported to his Nazi associates through his deputy living in Germany, Wiljam Hagelin. For the most part, few Norwegians within Norway were aware of the close relationship which existed between Quisling and Hagelin. Consequently, the latter successfully infiltrated the Nygardsvold Government. From this position, Hagelin was able to overhear the uncoloured opinions of Government members, whom he considered “conducted themselves like a secret “Norwegian-Anglophile society” (norwegisch-anglophile Gesellschaft). Although his inside information often contradicted assessments made by the German Legation in Oslo—which believed the Norwegian government meant to maintain its neutral position—it became the stock of Quisling’s reports to Berlin. For example, in a memorandum of 13 January, Hagelin reported the observations of two Norwegian ministers who felt that Germany had little hope of winning the war and therefore believed that Norway, because of its large merchant fleet, had little option but to “favour Britain in politics during the war, even more than it did in peace-time.” Reports such as these, conveyed to Rosenberg’s Auswärtiges Amt, reached the ears of Hitler and the
Großadmiral (via a specially appointed naval attaché) in the following weeks, and increasingly fuelled Hitler's demands for action in Norway.6

Quisling also offered his own plan for bringing his country within the German sphere. A number of his followers would be given intensive military training in Germany, thus providing a nucleus of loyal and highly skilled supporters who would act as area specialists and interpreters when a special German force arrived undercover in coal barges. Their aim: capture of the most prominent individuals in the government (including the king) to forestall military resistance, after which Quisling would assume political control of the nation and officially call for German troops. To German planners, though, Quisling's quasi-military coup had the hallmarks of a disaster waiting to happen. Neither Hitler nor his subordinates ever gave much credence to Quisling's ability to carry out such a risky enterprise and were always far more interested in his and Hagelin's ability to gather political and military intelligence. Real military planning would be carried out by experts.

German and Allied Planning Begins: Studie Nord and Auster

As in the early months of the war, the German Navy was the main driving force behind the Norwegian planning. It was none other than Raeder who reminded the Führer on 30 December 1939 that it was "essential that Norway does not fall into British hands."7 On 10 January 1940, the military deliberations of the small OKW staff, instructed by Hitler in mid-December to "determine how one might occupy Norway", were released to the three armed services as Studie Nord.8 Three days later, Raeder's naval staff assembled to scrutinise the Wehrmacht's rough preliminary survey. The meeting covered many of the major concerns previously raised, while at the same time making a number of recommendations. From the outset, the study made it clear that should Britain establish itself "in the Norwegian area it would create an impossible situation for Germany in its military strategy."9 The only way to ensure this did not take place was for Germany to "anticipate a British move and occupy Norway first." The Großadmiral voiced his own support of this assessment, adding that he was firmly convinced that Britain intended to occupy Norway in the "near future" to deprive its continental enemy of imports, particularly those of Swedish origin. Moreover, once installed in Norway—with the assistance of the "Jewish" pro-British Prime Minister, Hambro—Britain could lean on Sweden, choking the flow of all merchant traffic and possibly bringing it into the western powers' own sphere of influence.

Raeder's assessment met with a measure of disagreement from members of his operations staff. In their view, an imminent invasion by Britain was not probable and
furthermore, even if the British had the requisite resources to carry out such an action (which the operations staff doubted) it would not be without risks, explicitly, the possibility of Britain running into “strong and extremely undesirable opposition” from the Soviet Union on the one hand and severe countermeasures from Germany on the other hand, namely the occupation of bases in Denmark, and if need be, in Sweden. All in all, the operations division remained sceptical about the idea that Britain would, or could, release a large enough force with which to occupy Norway merely to counter Germany’s threat. While Raeder agreed that the maintenance of Norwegian neutrality remained the best means of ensuring the continued use of Norwegian territorial waters for German merchant traffic, especially iron ore imports, he warned that the Norwegian political situation and the war in general was not predictable. “It is therefore necessary, on principle,” noted Raeder as he wrapped up the Norwegian segment of the meeting, “to include the occupation of Norway in the operational preparations for the general war strategy.”

In fact, on the other side of the Maginot Line and across the Channel, the respective French and British planners were seriously examining the possibility of just such an initiative themselves. Both London and Paris had seen the possibilities open to them for operations in Scandinavia since the beginning of the war, but these opportunities were accentuated after the outbreak of the Soviet-Finnish war. Public opinion in these countries greatly leant towards Finland in its David and Goliath struggle against the Red Army. However, although British and French leaders rationalised their planning for operations in Scandinavia under the noble guise of defending the principles of freedom against the bondage of Communism, the bottom line always remained the need to achieve strategically important gains against Germany; and this meant iron ore.10 To this end, deliberations from December 1939 through until early January 1940 centred on two alternatives: either a limited naval action aimed at stopping the ore traffic from Narvik to Germany, possibly by naval patrol vessels or mining of the Leads; or a major land-based expedition designed to secure the Swedish iron ore fields.11 Working against the latter proposal, however, was British determination to avoid becoming embroiled in a conflict with the Soviet Union, and the realisation that the success of any Anglo-French expedition was reliant on Norwegian and Swedish acquiescence. Even the limited action proposed for the Norwegian Leads had to be weighed carefully against the damage it would cause to their relations with the Scandinavian neutrals, damage that would undoubtedly make a future land-based operation much more difficult, if not impossible, to carry out. On the other hand, Winston Churchill, First Lord of the Admiralty, felt that action should be taken regardless of the niceties of
international law. "Small nations", he asserted on 16 December, "must not tie our hands when we are fighting for their rights and freedom ... Humanity, rather than legality, must be our guide". This sentiment found favour in Paris.  

During this period, the French were most insistent that operations in Scandinavia be carried out, and in fact, they were very taken with the idea of making the Scandinavian Peninsula a major theatre of the war by initiating a landing near Petsamo, in northern-most Finland—a move which would side-step the need to gain Norwegian and Swedish approval. However, the French proposal cut to the very heart of the British Cabinet's reluctance to pursue operations in the region: the fear that such action could bring Hitler and Stalin into a closer union, and the appalling prospect of Britain being drawn into direct conflict with the Soviet Union. For example, on 19 December at the Supreme War Council when Edouard Daladier, the French Premier, strongly pressed for action to stop German access to Swedish ores—no doubt eager to draw German attention away from the Franco-German border—Neville Chamberlain bluntly countered that his country was not yet ready to declare war on the Soviet Union.  

Even Churchill, ever an optimist regarding military operations in Norway, and who did not think that operations in Scandinavia would necessarily lead to "general hostilities with Russia", had to admit that he was "most anxious" to avoid such an eventuality.  

After mulling over numerous reports weighing the relative efficacy and cost of the two alternatives, the British and French decided to attempt the limited naval action to sever Germany's iron ore supplies, despite the fact that this would require the Royal Navy to operate within Norwegian territorial waters. At the same time, secret preparations were made for a possible occupation of Stavanger, Bergen and Trondheim. To test diplomatic reaction, the British and French communicated their intention to enter Norwegian territorial waters in pursuit of vessels bound for Germany to the Norwegian and Swedish governments. The predictable outcry that ensued from both Oslo and Stockholm, who clutched their neutrality ever closer to their chests under the shadows of their Communist and Fascist neighbours, was so vehement that the Anglo-French leaders resolved to back away from the operation against Narvik traffic on 12 January. In the end, despite the French chomping at the bit, and "much to the disgust" of Churchill, the British Cabinet refused to commit themselves to immediate action, especially after the Chiefs of Staff reported that any attempt to capture the Gällivare fields in the face of Norwegian and Swedish opposition would not be successful. Nevertheless, in the hope that the neutrals could be gently coerced into seeing things the Anglo-French way, they were not advised of
the decision to drop the planned violation of Norwegian territorial waters, while in the background, planning for the major land-based expedition continued apace.

Meanwhile, the German Naval Staff carried out Raeder’s proposed enlargement of the Wehrmacht’s Studie Nord. Nearly all the recommendations developed by the Navy in this study were repeated in the subsequent planning phases. The naval staff envisaged a landing at all the major ports, including Oslo, Kristiansand, Stavanger, Bergen, Trondheim, Narvik, and Tromsø. They also noted that given the relative weakness of the German Navy vis-à-vis the Royal Navy, the prerequisite for success would be complete surprise. If this was achieved, Norwegian warships were considered to be of no threat to German forces while the only British naval vessels they were likely to encounter were weak patrolling units which happened to be in the region at the time of the invasion. The naval staff also felt that the best way to bring in the assault force was in two separate waves. The first of these would arrive by warship once shore batteries had been neutralised. The second wave of soldiers, along with logistical materials, would arrive by merchant vessel. In these deliberations the Luftwaffe was given a relatively limited role because the poor weather conditions of mid-winter were unfavourable for conducting large-scale aerial operations.

That the Luftwaffe would have an important role in any Norwegian campaign, however, was recognised early on in the planning process by the less partisan OKW. In the week following Hitler’s meeting with Quisling, Generalmajor Alfred Jodl, head of the OKW’s operations section, met with various Luftwaffe personnel regarding Norway. For instance, on 13 December, and within hours of Hitler ordering the establishment of a small staff to look into an occupation of Norway, Jodl met with Hauptmann von Sternurg, a Luftwaffe staff officer, and on 18 December discussed the “Norwegian matter” with Hans Jeschonnek, the Luftwaffe’s Chief of Staff. Two days later, Jodl and Generaloberst Wilhelm Keitel, the OKW’s Chief of Staff, discussed deploying elements of the X Fliegerkorps and the Luftwaffe’s Strategic Air Reconnaissance Group “Rowehl” in reconnaissance over Norway. Indeed, OKW’s Studie Nord had directed that a Luftwaffe general be appointed head of a special staff created to plan for the campaign and “who would at the same time be entrusted with the execution of any subsequent operation.”

Generaloberst Erhard Milch, the Air Ministry’s State Secretary and the Luftwaffe’s Armaments Chief, was appointed to head this small staff, called Oyster (Auster), which assembled for the first time on the morning of 14 January 1940. This, however, was also its
last meeting, because in late January Hitler recalled Studie Nord, dissolved Oyster, and placed all the planning for the campaign in the hands of the OKW.24

The Kranke Staff

Traditionally, the High Command of the Army (Oberkommando des Heers, or OKH) had been the primary institution through which the German state had waged war, but in 1938 Hitler established the OKW as a means by which he could gain direct control over the armed forces. It was as Supreme Commander of the Wehrmacht that Hitler on 23 January placed the planning for Norway firmly within the hands of the OKW. As Jodl jotted in his diary, the formulation of plans for the northern theatre would now be prepared “only by the OKW.”25 The preamble of the order signed by Keitel noted that it was Hitler’s desire that “work on Study ‘N’ would be continued under his personal and immediate influence”. Consequently, a working staff was to be formed within the OKW, creating the nucleus of any subsequent operational planning group.26 Keitel’s closing sentence informed all three service commanders that further operations will be conducted under the code name “Weserübung” (Weser-exercise), named after the Weser river which runs past the German port of Bremerhaven and empties into the North Sea.

The reasons for increasing the pace of the planning and placing it within the hands of OKW were fourfold. First, the campaign in the west was delayed. Originally Hitler had hoped to carry out his assault on France and the Low Countries before the end of January, but the likelihood of inclement weather in the following months, and a major security lapse which resulted in German plans for Fall Gelb (Case Yellow) falling into Allied hands on 9 January, forced the Fuhrer to postpone the assault in the west until the Spring.27 In the eyes of German planners this delay increased the possibility of Allied operations in Scandinavia, and therefore German preparation of contingency plans for an invasion of Norway needed to be stepped up. Hitler, for his part, was moving gradually closer to Raeder’s position, perhaps influenced by spreading rumours and newspaper reports alluding to imminent Anglo-French intervention in Finland.28 Second, the security breach which delayed Fall Gelb led Hitler to believe that secrecy surrounding operations in Norway would be better served by keeping the planning within the OKW. The danger of allowing a wide body of military personnel access to secret material was graphically illustrated by an episode in early January, when, in contravention of standing orders, Hellmuth Reinberger, a Luftwaffe major, had flown to Cologne bearing secret papers concerning Fall Gelb. Flying in poor weather, the pilot strayed over Belgium and when his aircraft suffered engine failure, made
a forced landing on Belgian soil. Although the officer attempted to destroy the documents before capture, he was only partially successful, and the Allies were alerted to German intentions. (The stupidity of the event of course led some Allied commanders to ponder the possibility that it was nothing more than a clever plant by the Germans.) After this event it appears that Hitler hoped that by removing the planning for Norway from the Luftwaffe—an action which created a good measure of ill-feeling among its senior officers, including Hermann Göring, the Luftwaffe’s Commander-in-Chief—and placing it within his personal OKW staff, he could preserve one of the most vital elements of the eventual operation: surprise. Additionally, never before had the German armed forces undertaken an operation which required the close coordination of naval, air, and army elements over such a great distance. Finally, since OKW was essentially Hitler’s own personal staff—rather than a true joint operations staff—the campaign would essentially be his operation, and would thus fulfil his Feldherr aspirations. Logically then, Hitler felt that the OKW, as Germany’s military umbrella organisation, would be ideally suited to plan and oversee the campaign.

With these factors in mind the small Norway planning group, under the leadership of Kapitän Theodor Kranke, was assembled on 5 February as a distinct section within the OKW’s Operations Branch. Within Kranke’s staff each armed service was represented by an officer.29 Aside from the OKW’s introductory work, Studie Nord, and its subsequent consideration by naval personnel in early January, the Kranke staff had to start from scratch. This was nowhere more apparent than in the area of intelligence.

Although it was widely assumed after the successful invasion in April that German planners had been gathering intelligence well in advance, this was not the case.30 In line with Hitler’s early determination to keep the Scandinavian nations out of the war, not a single specialist intelligence agent had been assigned to the Scandinavian region, let alone to Norway, before November 1939.31 Consequently, material had to be assembled in great haste in order to prepare plans. In the first instance, the Germans gleaned general geographical and demographical information from a wide range of sources, including tourist guides and brochures, and hydrographic charts.32 Yet despite the fact that over the years the Navy had amassed a considerable amount of material on Norway’s long coastline, they lacked photomaps of the ports and bays which would be essential for disembarking German men and equipment in an invasion. Moreover, the Luftwaffe would require its own accurate photo-maps detailing not only Norwegian airfields, which would be targeted for parachute drops followed by airborne landings, but also the disposition of anti-aircraft defences. Despite the efforts of a youthful Luftwaffe Attaché, Hauptmann Spiller, who had
gathered a small amount of useful intelligence since his arrival in Norway in March 1939, the most valuable material came from air reconnaissance; principally the Luftwaffe’s Strategic Air Reconnaissance Group, Rowehl. Using high altitude aircraft in order to avoid overt infringement of Norwegian and Swedish neutrality, Rowehl aircrew took photographs of all the important Norwegian navigational channels, significant ports and serviceable airfields from Oslo in the south to Kirkenes in the far north. To reach the latter far-flung location, the Luftwaffe utilised four-engined Focke-Wulf Fw 200 Condors—converted airliners—flying from East Prussian airfields. Rowehl aircraft also made strategic reconnaissance flights over the eastern ports of the British Isles, especially Scapa Flow, with a view to forewarning German planners of Anglo-French preparations for an operation in Norway. Clearly, the information collected (mostly from late February 1940 onwards) by Rowehl crews was essential to conducting the Norwegian campaign.

Within three weeks and in spite of the intelligence handicaps, Kranke’s staff produced a reasonably detailed operational plan. As with Studie Nord, the Germans broke Norway into six operational zones: Oslo Fiord and its environs, the region between Langesund and Stavanger; the region around Bergen; Trondheim; Narvik; and finally, Tromsø and Finnmark. The Kranke staff reasoned that the successful occupation of these relatively isolated and small geographical regions would give German forces control of the entire country.

This prospect was possible due to the physical and climatic conditions which prevailed over much of Norway. Situated on the western portion of the Scandinavian Peninsula, the coastline and numerous small off-shore islands of this nation are bathed in the waters of the relatively sheltered Skagerrak, separating Norway from continental Europe; the North Sea in its western approaches; the Norwegian Sea in the north-west, and the frigid Arctic waters of the Barents Sea in the extreme north. Norway’s very long seaboard of 2,600 kilometres (expanding to 20,000 kilometres when off-shore islands are included) is made up of steep and narrow fiords punched into the mountainous heart of the country. From the deep waters of these winding fiords rises a rugged and barren mountainous plateau of which nine-tenths lies at a height of more than 300 metres and one-half over 600 metres. In addition to this challenging topography, Norway’s climate can be severe, particularly in the east where it shares a 1,600 kilometres-long border with Sweden and a lengthy winter season ensures that the region remains snow-covered for much of the year. Although in the west the climate is tempered by the Atlantic Ocean and in the north by the Gulf Stream, which allows harbours to remain open year-round, the rigours of long
winter darkness punctuated by blizzards make the northern-most part of Norway particularly inhospitable.

Given the harsh topographical and climatic features that dominate much of Norway it is not surprising that, although geographically larger than the British Isles, its population in 1940 lingered below three million; who for the most part lived close to the coast in a smattering of urban settlements or in valley farming communities. Of the major cities, only Oslo, the capital and economic heart of Norway, and Bergen boasted of populations over 100,000 while the medieval city of Trondheim, the third largest urban centre and gateway to the north, had approximately 50,000 inhabitants.

The rugged terrain separating these communities also created a formidable barrier to internal communication by rail: in the south a rail network with Oslo at its hub fanned out to Kristiansand and Bergen; the central region was connected by a series of lines focused on Dombas and Trondheim; and the northern region had only the short line that bore ores from deep within Sweden over a sliver of Norwegian territory to the port of Narvik. Yet no single line covered the whole country and consequently, communication and transportation were more often than not seaborne. Given that these urban centres and other smaller towns dotting the Norwegian coast were relatively isolated, it became clear to the Germans from the beginning of the planning process that they could essentially gain complete control of the entire nation by the occupation of these modest geographical regions and a handful of strategically important points (such as Narvik).

The Kranke plan, therefore, envisaged the simultaneous occupation of Oslo, Kristiansand, Arendal, Stavanger, Bergen, Trondheim and Narvik. Its main point of divergence from the OKW's earlier Studie Nord lay with the major role assigned to the Luftwaffe. In addition to providing bomber and fighter support, the Luftwaffe would, with the exception of the distant centres of Trondheim and Narvik, be responsible for the delivery of one-half of the occupation forces. On the first day of the invasion alone and in conjunction with the delivery of troops by fast warships, some eight air transport groups would deliver approximately five battalions of paratroops in the first wave. Over the next three days this would be followed by a massive airlift which would ferry in nearly an entire infantry division. Little Norwegian resistance, either at sea or on land, was expected and a consolidation of the German position, including the acquisition of naval and air bases in Denmark, would be secured by diplomatic means. This would enable the continuation of the Norwegian government in internal matters, albeit with a reduction in the size of its
armed forces. However, this work by the Kranke staff, and all the preceding planning, had been just that: merely planning.

Hitler had been initially reluctant even to begin contemplating a Norwegian campaign and once he set the preparations in motion its progress could best be described as sedate. By mid-February, two months after the setting up of the small staff to look into how one might occupy Norway, the whole project still had a distinctly preliminary air about it. Although Hitler had admitted that German possession of Norway would benefit Raeder’s “siege of Britain”, and that Germany would be in real difficulties should the Allies take action in Norway, his heart was not really in it. This may be due partially to his concern over the upcoming campaign in the West, but it also appears that he had no real conviction that the British would act first in breach of Norwegian neutrality. That is, not until 16 February 1940, when a spectacular act of piracy inside Norwegian territorial waters snapped Hitler back on his heels.

The “Altmark Outrage”

The Altmark, an unarmed German supply-ship on her homeward journey from the South Atlantic where she had fuelled and provisioned the German raider Graf Spee (scuttled in December in the La Plata Delta off Uruguay), slipped into wintry Norwegian territorial waters north of Trondheim on 14 February 1940. In addition to provisioning the doomed pocket battleship, the Altmark had taken aboard 303 of her British prisoners. Although Norwegian officials at Bergen were suspicious as to the actual nature of the vessel’s “cargo” they allowed her to proceed unhindered through the Leads, because under the Hague Rules the Altmark as a naval auxiliary flying the colours of the German merchant navy had the right to unhindered use of these waters. Nevertheless, the British were not about to allow the Germans any such generosity and set about to relieve the Altmark of her suspected “cargo”. By the following day, the Germans realised from intercepts of British signals that “the movement of British light forces in the direction of the north Norwegian coast was probably aimed to intercept the supply-ship Altmark.” Despite this threat, the German naval staff felt that the “ship seems to run less risk inside territorial waters than outside.”

Indeed, British reconnaissance aircraft had already identified the Altmark and by 1500 hours on 16 February, a Royal Navy flotilla of one cruiser and six destroyers was shadowing the supply-ship along the coast. Admiralty instructions to the leader of the flotilla, Captain Philip Vian of H.M.S. Cossack, ordered that, unless the Norwegians
permitted a joint British and Norwegian guard to escort the German supply-vessel back to Bergen for a more thorough inspection, he was to board the *Altmark* and release the prisoners.\(^{41}\) Thus, by mid-afternoon it was becoming apparent to the German naval staff that their belief that the *Altmark* would be "completely safe within Norwegian territorial waters could no longer hold." "In order to preclude an enemy attack in the outer territorial waters", the *Altmark's* commander, Kapitän Heinrich Dau, received instructions at 1612 to make for the nearest Norwegian fiord in the hope that she could shelter there, awaiting the arrival of sufficient German naval vessels to secure safe passage for the beleaguered supply-ship to Germany—an impossibility as it turned out due to the poor operational readiness of German destroyers at the time and navigational difficulties arising from severe ice conditions.\(^{42}\) Only three hours later, the *Altmark* was forced to seek shelter within Jøssing Fiord when the destroyer *Intrepid* tried to come alongside within 200 metres of the shore. By this time the Germans were raining diplomatic censures down upon the heads of the Norwegian government and its officials with respect to breaches of their territorial waters. Meanwhile, at the mouth of the fiord two Norwegian torpedo-boats were actually trying to prevent just such a breach, lying in an unenviable position between men-of-war of the Royal Navy and the *Altmark* at anchor in her snow-cloaked sanctuary.

The commander of the *Altmark* was well aware of his vessel's vulnerability and in a bitter message to the British flotilla outside the fiord drew attention to the fact that his ship would be sunk and set on fire "at the moment the first English soldier would cross its rail."\(^{43}\) However, by the time Kapitän Dau dispatched his second communiqué it had become apparent to him that his unarmed ship had little option but "to yield to force" and reluctantly declared that he was willing to ferry over the 303 prisoners with his own vessels.\(^{44}\) Although the British commander of the *Cossack* choose to disregard this offer, he did not ignore Dau's threat that, should a Royal Navy force attempt a boarding action, the men would be repulsed by a "force of arms" wielded by the *Altmark's* "military body"—a rather grandiose threat since the crew of the *Altmark* were totally ill-equipped to carry out any such action—and this bluff at least goes some way to explaining the tragic events that followed.\(^{45}\) With a good measure of Royal Navy "daring do", the *Cossack* breached the Norwegian sentinels' blockade around midnight and burst into the fiord. The British boarding party assaulted the German supply-ship, seizing the ship's bridge and "began firing like maniacs into the German crew", noted the *Altmark's* own grim post-action report.\(^{46}\) "The *Cossack* by ruthless means of its weapons" recorded the German naval staff war diary,
“seized the prisoners and made off with them.” Six of the German crew were killed and a number seriously wounded.

For the British, the bold rescue proved to be a propaganda treat back home, and despite howls of protest from the German government regarding violations of international law, and Goebbels’ attempt to raise “a hellish choir of indignation” among the international press, they argued adamantly that the Norwegians were seriously remiss in not searching the vessel and discovering the prisoners in the first place. In Berlin, however, a completely different assessment of the affair was being made. Circumspectly, Hitler ordered that Norwegian neutrality was to be strictly observed in the recovery of the Altmark—which had run aground and damaged her propeller—and in continuing naval operations. Underneath, though, he was seething. His assessment was neatly summed up by the naval staff’s own conclusions:

It is quite clear from Admiralty orders and the steps taken by the British forces that the operation against the supply ship Altmark was carefully planned and directed with the clear object of using all available means and if necessary violating Norwegian territorial waters, in order to capture the Altmark or to board her and free the prisoners.

The “Altmark outrage”, as Hitler would later describe it, showed that the British had no intention of observing Norwegian neutrality. Moreover, the apparent ease with which the Cossack was able to enter the fiord despite the presence of two Norwegian torpedo-boats, plus the mild diplomatic censures issued against British transgressions by the Norwegians, made Hitler’s blood boil. The whole incident suggested that not only were the Norwegians all too willing to look the other way in matters of British interest, but also added weight to the reports streaming in from the co-conspirators, Quisling and Hagelin, that secret agreements had been reached between Oslo and London.

In fact, although the British and French had not been able to secure any secret agreement with Norway, they continued their planning and preparations for a Scandinavian expedition against a background of renewed Soviet assaults in late January and early February on the Karelian isthmus, growing popular sympathy for Finland, and the belief that the Germans might attempt to secure their iron ore supplies in the spring. When the two governments met at the Supreme War Council on 2 February 1940, they agreed that the preservation of Finland was of major concern to the Allied cause. Additionally, they generally acknowledged that aid to Finland—Field Marshal Mannerheim, the Finnish Commander-in-Chief, had requested reinforcements of some 30,000 men—should be coupled with the seizure of Sweden’s northern iron ore mines in order to help the Allies
accomplish their main aim: the defeat of Germany. Thus the operation, "ostensibly and nominally designed for the assistance of Finland", would "kill two birds with one stone."53

To overcome the Nordic neutrals' objections to an advance from the Norwegian coastline through northern Sweden, the Allies proposed moral leverage that would give them at least some justification for the expedition.54 Just prior to its launch, the Allies intended to have Finland deliver an international plea for assistance, with additional diplomatic entreaties to the Norwegians and the Swedes, appealing for aid to repulse the Soviets from the Scandinavian Peninsula. Originally earmarked for the British Expeditionary Force in France, the 42nd and 44th Divisions (which Chamberlain proposed could assume the guise of a "volunteer force") would be held back for Scandinavia. The French Prime Minister, Daladier, gave his support for the plan, as well as recommending that the earlier Petsamo proposal be kept in mind should they fail to overcome neutral opposition. That the Allies would ever be able to subdue Norwegian and Swedish reluctance however, always seemed unlikely, particularly after the souring of Anglo-Norwegian relations in the wake of the Altmark incident.

The timidity of the Allies was greatly influenced by the fact that Britain had plenty to lose from action in Scandinavia. In addition to British industry's own dependence on considerable amounts of Swedish ore, economic planners also feared jeopardising the Anglo-Norwegian trade agreement, facilitating the use of Norwegian shipping should these vessels become the target of German U-boats and aircraft. Moreover, the British Cabinet desired to act, as much as possible, from the moral high-ground as defenders of international law in accordance with the League of Nations. How neutrals world-wide—above all, the United States—would react to an Anglo-French operation that breached Scandinavian neutrality hindered Allied planning. Therefore, despite the 5 February agreement, Churchill's continual harping on the subject and Daladier's desire for swift action (partly resulting from domestic pressure increased by the proximity of French elections), by the end of the month indecision and disagreement over how to proceed was about to rob the Allies of the justification they needed. The Finnish situation had reached desperation point. Under the onslaught of the Red Army, which had penetrated Finnish defensive lines and in the face of increasing losses, Finnish morale reached rock-bottom.55

On 1 March, the Finnish ambassador requested 100 bombers with crews and 50,000 soldiers from Britain, and given the seriousness of Finland's military crisis he appealed for an answer within 24 hours. Britain still hesitated. Its leaders raised numerous technical problems with regards to the delivery of equipment, and the more cynically-inclined felt that
because of the apparent unreasonableness of the request, the Finns never expected to receive a favourable reply. Rather, the outrageousness of the appeal anticipated a British refusal which would act as a face-saving measure for opening negotiations with the Soviets. Furthermore, many believed that delivery of the aircraft solely by themselves (the most viable option in the short-term) would only forestall the inevitable and once the Finns were defeated, they would be irrecoverably lost. By 5 March it was all but over, and the Finns entered into negotiations with the Soviets. Despite a flurry of last minute proposals by the British and the French, which included the possibility of a “semi-peaceable invasion of Norway”, the Finno-Soviet peace treaty was signed on 12 March.\(^56\) Over objections from the Chief of the Imperial General Staff and the First Lord of the Admiralty, it was decided to disband the units of the expeditionary force.

The British did, however, press on with preparations for one of Churchill’s ideas. Codenamed *Royal Marine*, the operation involved the aerial dropping of floating mines in the main German waterways, such as the Rhine. Moreover, the French under the leadership of Daladier’s replacement, Premier Paul Reynaud, wanted a less restrictive interpretation of Scandinavian neutrality. As a note prepared within the French Foreign Ministry stated: “We should not let ourselves be bound . . . by some juridic scruples which our enemies have since thrown to the winds.”\(^57\) With this in mind, the French presented a new two-pronged plan to the British on 25 March, which, among other things, called for the cutting of Germany’s iron ore supplies via Norway, submarine warfare in the Black Sea, and air attacks on the Caucasus oil fields. This type of economic warfare would strike at German dependence on foreign sources for raw materials, without involving direct offensive action against Germany itself.

On 28 March, at the Supreme War Council, Chamberlain successfully blocked the parts of the French plans which could result in a conflict with the Soviet Union, but did agree to the mining operation of Narvik (Operation *Wilfred*) on 5 April. For his part, Reynaud provisionally accepted an early April date for the implementation of *Royal Marine*.\(^58\) The mining of waters off Narvik also opened the possibility of German retaliation in Norway, which would provide the justification for, or even Norwegian consent to, a British and French counter-operation (*Plan R 4*) in south-western and northern Norway with a view to securing the Swedish iron ore mines. “The moment the Germans set foot on Norwegian soil, or there is clear evidence that they intend to do so,” ran an approved report by the Chiefs of Staff:

our objective should be (a) to dispatch a force to Narvik to secure the port and, subsequently, the railway inland as far as the Norwegian-Swedish
frontier, and to pave the way to the Gallivare ore fields; (b) as a defensive measure, to dispatch forces to occupy Stavanger, Bergen and Trondheim, in order to deny their use to the Germans as naval and/or air bases.  

Characteristically, and much to the frustration of the British, the French then raised objections to Royal Marine, which they wanted delayed by three months in order to prepare defences around their aircraft and munitions factories so that they would be less vulnerable to German retaliatory air strikes. In the end, despite British exasperation and the admonition of Sir Alexander Cadogan, head of the Foreign Office, that “we really must try to bring them to heel”, it was decided to avoid putting further strain on the alliance by simply dropping the Royal Marine component from the operation.

Although unaware of the full extent of these Allied considerations and preparations, Hitler was nonetheless infuriated by the “Altmark outrage” and the reports reaching Berlin of an Anglo-Norwegian coalition. Hence on 19 February, he “pressed energetically” for a speeding up of preparations for Weserübung. His fears were strengthened over the months of February and March by incautious references made by both Churchill and Reynaud regarding their designs on Norway. For example, on 2 February, the First Lord of the Admiralty dropped a couple of unguarded comments to neutral press attachés at a secret press conference in London, hinting at an Allied initiative in Norway. He followed this up on 30 March in a BBC broadcast in which he warned Norway that the Allies would continue the fight “wherever it might lead them.” On the very same day, German Intelligence intercepted a Paris diplomat’s report detailing a conversation with Premier Reynaud. Its contents revealed that the Allies would within the next few days be undertaking action in northern Europe. As Hitler relished pointing out after the invasion, British and French security lapses—plus information acquired by Göring’s code-breaking Forschungsamt—made his decision all the easier to make and greatly hastened the planning process.

Indeed, on 21 February, Hitler received the aristocratic General die Infanterie Nikolaus von Falkenhorst, who had been recommended by Jodl to assume overall responsibility for the operation. Jodl’s endorsement of Falkenhorst rested largely on the latter’s experience gained in 1918 during Germany’s intervention in Finland at the end of the First World War. In reality, Falkenhorst had only been a General Staff Officer at the time and his career since had been fairly mundane. Consequently, despite being rather grandiosely touted as a Scandinavian expert, he was not considered amongst the first rank of commanders available and his nomination reflected the Army’s relative indifference towards the project. Nevertheless, after introductions, Hitler dramatically impressed upon
Falkenhorst the fact that “I cannot and will not begin the offensive in the west before this affair has been settled.” After this, Jodl and Keitel detailed the two basic premises of the operation to the General: to forestall Allied action in the region by taking control of the main population centres and ports (in particular Narvik), and prevent the development of any local resistance or co-operation with British counter-operations. Falkenhorst took his leave of the Führer to purchase a tourist guide in order to determine how Norway could be secured. Although he later admitted that initially he had absolutely “no idea” about how this could be achieved, he worked on the problem in his hotel room, poring over his cheap tourist map until 1700 hours, at which time he returned to the Führer with a favourable assessment; and gladly accepted Hitler’s offer to command the campaign. By 28 February, Falkenhorst’s staff which included Kranke as the Navy’s representative, Oberst Robert Knauss from the Luftwaffe, Major Werner von Tippelskirch from the Army and an Abwehr representative, was deliberating in Berlin, and the first fruits of its labour—building heavily on previous investigations—soon came to light.

**The Weserübung Directive and its Fallout**

On 1 March 1940, only 13 days after the “Altmark outrage”, Hitler released his “Directive for Case Weserübung”. In the directive’s preamble, he made it clear that the situation in Scandinavia made it necessary to make all preparations for the occupation of Denmark—an innovation introduced by Falkenhorst—and Norway by formations of the Wehrmacht. Strategically, the occupation would achieve three goals: “it would anticipate English action against Scandinavia and the Baltic, would secure our supplies of ore from Sweden”; and would “provide the Navy and Luftwaffe with expanded bases for operations against Britain.” Although it was Hitler’s intention that the campaign be carried out in such a way as to be seen by the peoples of both nations as a peaceful occupation, designed to protect the neutrality of the northern nations, any resistance would be broken by force of arms.

The operation was split into two separate and simultaneous undertakings: the occupation of Denmark (*Weserübung Süd*) and the occupation of Norway (*Weserübung Nord*). The success of *Weserübung Süd* was dependent on the Army’s ability to secure strategically important points by a lightning thrust through to Skagen and the east coast of Fünen. Meanwhile, once the Navy had secured the Nyborg-Korsør route, seized the bridge spanning the Little Belt, and landed troops, it remained responsible for coastal defence. The Luftwaffe was directed to secure northern Danish airfields, and subject the Danes to aerial demonstrations of German air power in fly-overs of major urban centres.
Much the larger of the two operations, *Weserübung Nord* was to be a daring surprise occupation of important points along the Norwegian coast by sea and air. The Navy was responsible for preparing the transportation by sea of the assault troops and supplies. The Luftwaffe, as well as playing a significant role in the initial assault, was to ensure adequate air defence was provided for the occupying forces and that Norway was fully exploited as a base for the prosecution of the air war against Britain. Though Luftwaffe and Naval forces remained subordinated to their respective Commanders-in-Chief, an exception was made with regard to one reconnaissance wing and two motorised anti-aircraft regiments of the Luftwaffe, which were placed under the immediate command of Falkenhorst until Denmark had been completely occupied.

In carrying out preparations for this campaign, Hitler reminded his commanders that due to the looming threat of Allied operations in Norway, it must be prepared with the "utmost possible speed" because "should the enemy take the initiative in Norway, we must be able to take our own counter-measures at once." He also reiterated the necessity to maintain total secrecy so that the invasion would be a "complete surprise" not only to the northern countries but, more importantly, to "our enemies in the West." To this end all preparations, such as the establishment of supply dumps and embarkation points, should be circumspect, and in order to prevent a slip of the tongue by unwary soldiers and junior officers, troops were to be informed of their true destination only when they had put to sea.

As can be observed from the above outline, the directive was typically brief but acted as a framework for the nuts-and-bolts planning that was to follow. Regarding the implementation of these directives, it is important to note that Falkenhorst, as commander of *Armee Gruppe XXI* (Army Group XXI), remained "immediately subordinated" to Hitler "in all respects." The Führer was obviously determined to maintain personal control over the project, and therefore, retained operational command within the OKW. It was also hoped that a continuation of the present planning structure would facilitate Hitler’s demand on 3 March to use the "greatest speed" in laying the groundwork for the Nordic occupation. Hitler’s demanding timetable for the OKW and the respective service commands called for the assembly of forces for *Weserübung* by 10 March, and readiness for the "jump-off" within three days. Thus a landing in northern Norway would be possible by about 17 March. This schedule proved too ambitious by about three weeks, in part because residual ice in the Baltic had yet to thaw, greatly hindering naval preparations in this region. On top of this, the end of the Soviet-Finnish Winter War on 13 February initially created a degree of uncertainty as to whether the operation was still necessary.
Although German naval planners assessed that the subsequent peace in the far north deprived the Allies of their pretext, at least for the “present time”, vigilance still needed to be maintained, especially as it appeared likely that the British would not easily give up their strategic aims in northern Europe.\textsuperscript{74} The Führer concurred, and ordered that preparations for Weserübung were not to be carried out with “undue haste”, but should continue quietly and with special consideration given to secrecy. This was not, however, a declaration by Hitler that he was intending to abandon his “northern” strategy. Despite reservations by the OKW as to the likelihood of Allied operations, the Führer was still convinced that Britain was determined at some point to cut Germany off from its iron ore.\textsuperscript{75} This was backed up by reports from the Navy that British warships seemed intent on attacking German iron ore traffic even within Norwegian territorial waters. Hitler therefore considered that:

the execution of Weserübung is still necessary and [he] insists that preparations for it should be so far concluded that it will at any time be possible to start the operation at the shortest notice. Weserübung would then be carried out shortly before Fall Gelb.\textsuperscript{76}

Raeder seems, on the whole, to have agreed with his Commander-in-Chief, because when they met on 26 March, the general consensus of the meeting was that “sooner or later Germany would be faced with the necessity of carrying out the operation”, even if in the short-term an Allied assault did not appear on the cards. Thus it was agreed that the invasion should be carried out as soon as possible, and preferably close to the new moon on 7 April when the tides would be at their highest, and no later than 15 April when the nights were becoming too short.\textsuperscript{77} Moreover, U-boats positioned for Weserübung could not be expected to maintain their current holding positions past the second week of April, and at present, the overall readiness of naval warships and transports for the campaign was considered good. In the end, it was not until early April that Hitler reached the final stage in his planning for Weserübung, and once he had been informed by Raeder and Göring of the suitability of the weather for naval and Luftwaffe forces on 2 April, he designated 9 April as Weser-day (Wesertag) and 0515 as Weser-time (Weserzeit).\textsuperscript{78}

In some respects though, the 1 March directive for Weserübung came as a bit of a bombshell to the high commands of the Army and the Luftwaffe, who took it as a personal affront that they had been effectively downgraded in the planning process. The Army felt, somewhat justifiably, that it had been sidelined in the whole project. As Generaloberst Franz Halder, Chief of the Army General Staff, scribbled in a parochial margin note of his war diary on 2 March 1940, Hitler had not “exchanged a single word with the commander of the Army on this matter.”\textsuperscript{79} Moreover, the Army was furious because not only were
troops being siphoned off by the OKW with scant reference to itself, but the demands placed on it, especially in the light of the Army's commitment to the invasion of France and the Low Countries, were too heavy. Jodl was able to placate the OKH somewhat by scaling down the requisition of Army forces on 2 March. The Luftwaffe, however, presented an altogether more formidable obstacle in the form of the powerful Hermann Göring—who would plague attempts to establish joint theatre commands in Norway (and elsewhere) throughout the war.

The head of the Luftwaffe appeared reluctant to have his forces dissipated by action in Norway from the very inception of the plan. Two reasons may be put forward to explain this. First of all, he disliked the relative demotion of the High Command of the Luftwaffe (Oberkommando der Luftwaffe, or OKL), and hence his own position, when Hitler placed planning for the project in the hands of the OKW. This down-grade rankled with the Luftwaffe's Commander-in-Chief, and up until early March, had been expressed by the notable and deliberate absence of the Luftwaffe's representative from the OKW's planning meetings. For example, on 5 February when the special staff for Norway was assembled to meet Keitel, the Chief of the OKW, Jodl noted with a sigh of resignation that the Luftwaffe's representative "is still missing." Second, Göring was afflicted with that most pernicious of military diseases: inter-service rivalry. Between the Luftwaffe and the Navy this took not only the form of competition for the Reich's military output, but also control of the naval air arm which Göring had been coveting for some time—a matter that will be taken up in Chapter 5. This, plus his wounded pride at being demoted in the development of the operation, appears to have blinded him to the strategic merits of the proposal, and indeed, the benefit that bases in Norway would afford air operations. Therefore, Göring was reluctant to commit his prized air resources to an operation he felt was clearly Raeder's hobby-horse. Consequently, Göring was livid when he discovered that elements of his air units were to be taken from his command and subordinated to Falkenhorst under the Weserübung directive.

Once the directive was released, Göring wasted no time in objecting, and after verbally assaulting Keitel, presented his case to his Führer, resulting in a somewhat reduced demand on the Luftwaffe. On 4 March, Göring again declared his dissatisfaction with the subordination of his aircraft and personnel to Falkenhorst, and the following day all the Luftwaffe units—including the reconnaissance wing and two motorised anti-aircraft regiments—were placed within his own X Fliegerkorps for the operation. Nevertheless, these rumblings were just the calm before the storm.
On 5 March, the heavens burst open at the big *Weserübung* conference attended by all three service commanders and the Führer, when Göring threw one of his infamous tantrums. "The *Feldmarschall* vents his spleen", Jodl laconically noted in his diary, "because he was not consulted beforehand." Yes, he could justifiably claim he personally had not been consulted greatly, but as already noted, Jeschonnek, one of Göring’s closest deputies, had been in discussion with Jodl with regards to Norway since at least the third week of December 1939. Moreover, the fact that units of the Luftwaffe’s strategic air reconnaissance group, *Rowehl*, had been used extensively in photographic mapping of salient regions of Norway, and that the Luftwaffe had overseen the short-lived *Oyster* staff in mid-January demonstrates that Göring was not unaware of the continuing planning process. As Nickolas von Below, Hitler’s Luftwaffe attaché, astutely observed after the outburst, what really stuck in Göring’s craw was that he felt downright insulted that “Hitler had not conferred this task on him.”

 Barely concealing his disdain for Göring’s petulant display of frothy indignation, Jodl reflected on the overbearing Luftwaffe chief’s attempt to dominate proceedings and the lengths to which he went to “demonstrate that all previous planning preparations are all good for nothing.” Yet despite Göring’s animation and anger, it was, as even Below had to admit, all “in vain”. Hitler, already frustrated with delays to the planning process wrought by the various branches of the armed services, was unimpressed by his air commander’s antics and prohibited Göring from attending further meetings with himself for the following month.

The co-operation of the Luftwaffe at the highest level, however, was vital to the success of the undertaking, and on 7 March 1940 Falkenhorst met with Göring at his opulent hunting mansion, Karinhall, to discuss the up-coming campaign, and more importantly, smooth the *Feldmarschall’s* ruffled feathers. Meanwhile, Milch attempted to impress upon his air chief the strategic significance of Norway by presenting him with a copy of a book by the German naval theorist Wolfgang Wegener. Milch elaborated on this incident after the war by explaining that Wegener, “an Admiral in the First World War”, had written his book to show the necessity of occupying Norway, “because only once this had been achieved would it be possible for the Navy to wage war against England.” Milch evidently hoped to impress upon Göring the importance of Norway to the success not only of future naval operations, but also of air action in the unfolding war.
Operational Fine-tuning

In the face of this Luftwaffe dissatisfaction and inter-service squabbling, Hitler was either unable or unwilling to enforce a unified command for the campaign as he had originally hoped. In the short-term surprise and weight of numbers would help pave the way for the eventual victory in Norway, but in the long-term the special nature of the war in the Far North was ideally situated to a joint theatre command under an officer experienced in at least two of the three services. Early planners had put forward Generalleutnant Albert Kesselring, at this stage commander of Luftflotte 2, with his Army and Luftwaffe background as an ideal candidate but Hitler never carried this promising initiative through. Thus in the end, Falkenhorst was only really in direct command of the Army units, while the OKL and the High Command of the Navy (Oberkommando der Kriegsmarine, or OKM) conducted their own operational planning and maintained separate command of their respective air and naval forces during the campaign. The naval vessels were placed under Naval Groups West and East and the aircraft of X Fliegerkorps (Tenth Air Corps) were under the sole command of Generalleutnant Hans Geisler. Regarding this situation, Halder noted after the success of the invasion that Falkenhorst did not have a single aircraft under his control. In theory at least, this meant that should Falkenhorst require air support at any stage during the invasion, his request made the somewhat tortuous path from Army Gruppe XXI to the OKL, and then on to the X Fliegerkorps which would subsequently direct the air units necessary. On the other hand, Falkenhorst’s position did make him at least first among equals, because any amendments sought by the OKL or the OKM also required his assent. However, because inter-service rivalry resulted in a hodge-podge of command and inter-service arrangements, the success of Weserübung relied to a considerable degree on military professionalism and operational co-operation rather than a rigid, and unified command structure.

Aside from Göring’s theatrics, 5 March also saw the issuing of the first of many operational orders for the campaign that would be dispatched between early March and early April 1940. Without detailing all the amendments and additions made over this four week period, it is possible to provide a brief summary of the overall “look” of the operational plans that developed as Weserübung Nord and Weserübung Süd. Weserübung Nord essentially divided the campaign in Norway into two phases: the initial assault on Oslo, Kristiansand, Arandel, Egersund, Bergen, Trondheim and Narvik, followed by consolidation through reinforcement of men, equipment, and supplies.
“Operational Order No.1 for the Occupation of Norway” issued by *Gruppe XXI* placed Falkenhorst’s headquarters at Hamburg during the invasion, after which it would be transferred as soon as practicable to Oslo.\textsuperscript{89} From these headquarters the *General die Infanterie* had at his disposal 69th, 163rd, 181st, 196th, and 214th Infantry Divisions and two infantry regiments of the 3rd Mountain Division (the only experienced combat division). Added to this were a tank battalion, four batteries of 10cm calibre guns, two batteries of 15cm calibre guns, and two companies of railway construction men, plus a communications battalion.\textsuperscript{90} An additional three paratrooper companies, and three anti-aircraft battalions were supplied by the Luftwaffe and remained under the command of *X Fliegerkorps*. In total, the initial assault force on *Weser*-day numbered some 12,250 men, of whom 8,850 were destined for Norway and 3,400 for Denmark.

The delivery of the majority of these men naturally fell to the German Navy. With the Royal Navy lurking in the vicinity, its much weaker opponent needed to achieve surprise, because as Raeder soberly mused in his meeting with Hitler on 9 March:

> This operation runs counter to all the lessons of naval warfare, which indicate that it would only be justified if we possessed the necessary sea power, and this is not the case. On the contrary the operation will have to be carried out in the face of the greatly superior British Fleet. I believe, however, that given complete surprise the dispatch of the troops can and will succeed. History shows many cases of success in operations, which have violated the principles of war, always provided there is the element of surprise.\textsuperscript{91}

Therefore, as rapidity of deployment and military precision were required, the initial assault forces would be transported by warship. For the entire occupation of Norway and Denmark the Navy had organised its vessels into 11 Groups, of which the first six were dedicated to Norway:\textsuperscript{92}

**Group 1 (Narvik):** the battle-cruisers *Scharnhorst* and *Gneisenau* with 10 destroyers (2,000 troops)

**Group 2 (Trondheim):**

**Group 3 (Bergen):** the cruiser *Hipper* and 4 destroyers (1,700 troops)

**Group 4 (Kristiansand-Arendal):** the cruisers *Köln* and *Königsberg*, the service ships *Bermse* and *Karl Peters*, 3 torpedo boats, 5 motor torpedo boats (1,900 troops)

**Group 5 (Oslo):** the cruiser *Karlsruhe*, the special service ship *Tsingtau*, 3 torpedo boats, and 7 motor torpedo boats (1,100 troops)

**Group 6 (Egersund):**

the pocket battleship *Lützow* and cruisers *Blücher* and *Emden*, 3 Torpedo boats, 2 armed whaling boats, and 8 minesweepers (2,000 troops)

4 minesweepers (150)
To cover the most vulnerable part of the operation in northern waters, the *Scharnhorst* and *Gneisenau* (neither of which carried troops) would act as escort to Groups 1 and 2 as they made their way to Trondheim, and then on Weser-day the two battleships would set a north-westerly course to divert the expected arrival of the Royal Navy. There was, however, considerable debate over how long the other warships should remain, particularly at Narvik and Trondheim, after disgorging their human cargo. The Navy foresaw that the most dangerous part of their operation would be, as Raeder mentioned to the Führer, the "return voyage which entails breaking through the British naval forces." Raeder planned that once the landings were completed, the warships engaged in the northern landings would combine around the battle-cruisers *Scharnhorst* and *Gneisenau* for a breakthrough into southern waters. "At a time when the fate of the German fleet is hanging in the balance," the *Großadmiral* believed, not a single destroyer should be left behind at either Narvik or Trondheim. The Army, on the other hand, wanted the warships to remain to provide covering fire for the ground forces, especially as air cover would not be readily available initially in the northern extremities of the campaign. Although Hitler was inclined to agree with the Army's position, it was eventually decided that, while two destroyers were to be left at Trondheim, none were to be left behind at Narvik. In the south this was less of a problem as the Luftwaffe would provide air cover for naval operations, and a minefield was to be laid at the entrance of the Skagerrak to protect the western flank of the operations for Oslo and Kristiansand, where considerable British submarine activity could be expected.

All going well, the Germans hoped that there would be little contact with the forces of the Royal Navy and that any major action would be blunted by U-boats under the directives given in Operation *Hartmut*. To this end, 28 U-boats were deployed off the Norwegian coast and around the Shetlands-Orkney region. Their task was to protect German warships inside Norwegian fjords by stationing themselves (four at Narvik, two at Trondheim, five at Bergen, and two at Stavanger) in such a position that they could intercept British surface vessels attempting to breach the fjords and engage German warships. Additionally, in order to intercept an anticipated Allied counter-landing, a number of U-boats were stationed in groups in open waters (six north-east of the Shetlands, three east of the Orkneys, plus four situated east and west of Pentland Firth). These U-boats (plus two off Stavanger and three west of Naze) were also instructed to prevent British vessels from interrupting maritime communications between Germany and Norway. On 4 March, the German Navy began cancelling U-boat operations elsewhere,
holding them in readiness for the invasion. By 11 March, a small number of Dönitz’s long-range U-boats were released to cover the major ports along the western Norwegian coast in case of a British operation in the region, and in readiness for their own Nordic invasion.\(^6\)

However, the campaign faced a number of logistical problems that had to be overcome: first, the warships were unable to carry the necessary weapons, munitions, and provisions for the initial assault; second, once the British were alerted to the German invasion it would be very difficult for supply-ships to make their way up the Norwegian coast to deliver the necessary heavy equipment and reinforcements to consolidate the Germans’ Scandinavian foothold; and finally, the destroyers of Group 1 and Group 2 would, once they had reached Narvik and Trondheim, need refuelling for the lengthy “dash” home.

The first of these problems was overcome by the creation of an “Export Group”, so-called because they were intended to appear as normal merchant traffic \textit{en route} to Murmansk. The seven ships of the “Export Group” would leave Hamburg for Stavanger, Trondheim and Narvik ahead of the warships. The second problem was solved by the deployment of 15 vessels of the “1st Naval Transport Group” which would leave Stettin for Copenhagen, Oslo, Kristiansand, Stavanger and Bergen loaded with the initial reinforcements, including 3,761 men, 672 horses, 1,377 vehicles and 59,035 tons of Army supplies. The last difficulty was resolved by deploying a set of three tankers laden with 21,000 tons of fuel oil. Of these vessels, the \textit{Kattegat} and \textit{Skagerrak} would make for Trondheim and Narvik respectively from Wilhelmshaven, while the \textit{Jan Wellem} plied Arctic waters from \textit{Basis Nord}, on the Murmansk coast, to Narvik to refuel the destroyers of Group 1 and Group 2. In addition to these, five smaller tankers would make their way from Hamburg to Oslo, Stavanger, Bergen and Trondheim. Essentially unprotected, except for monitoring by air reconnaissance, all the vessels involved in the initial reinforcement phase and the refuelling of the warships were to travel individually and as inconspicuously as possible with a view to arriving at their respective destinations on the day of the occupation. In the twelve days following the invasion, the “2nd to 8th Naval Transport Groups” would shuttle the remaining reinforcements between German ports and Oslo, totalling approximately 54,500 men, 5,850 horses, 12,600 vehicles and 48,200 tons of Army supplies.\(^7\) Because of the vulnerability of the merchant vessels and the need to retain absolute secrecy, the OKW ordered that none of these vessels were to leave port more than six days before \textit{Weser}-day. This last demand made it very difficult for these vessels to reach their destinations on time.
The "Operational Order No. 1 for the Occupation of Denmark", _Weserübung Süd_, was issued on 20 March 1940.® Command of the Danish campaign was placed in the hands of the _XXXI Korps_ under the leadership of _General der Flieger_ Leonhard Kaupisch. At his disposal were the 170th and 198th Infantry Divisions, the 11th Motorised Rifle Brigade, three motorised machine gun battalions, two batteries of heavy artillery, two tank companies and three armoured trains. From the Luftwaffe a company of parachute troops, a motorcycle company of the "General Göring" Regiment, and two battalions of anti-aircraft guns were supplied for the sweep across the Jutland. The main objective of _Weserübung Süd_ was the capture and securing of Aalborg, at the northern end of the Jutland Peninsula. Aalborg's airfields were to be taken early on Weser-day by a parachute platoon and an air-landed battalion. The full weight of the 170th Division and the 11th Motorised Rifle Brigade would then sweep across the entire peninsula from Germany. Considering the bulk of the operation could be carried out by land, and because interference by the Royal Navy was very unlikely, the five groups of naval vessels deployed by the Germans for occupation of the outlying Danish islands and Jutland's west coast were made up of very light units and merchant vessels (the exception being the aptly-named First World War battleship _Schleswig-Holstein_):

Group 7 (Korsør and Nyborg): (1,990 troops)
Group 8 (Copenhagen): (1,000 troops)
Group 9 (Middelfart): (400 troops)
Group 10 (Esbjerg): (none)
Group 11 (Tybovø): (none)

Norwegian and Danish Defences

Neither _Weserübung Nord_ nor _Süd_ was expected to experience significant resistance from the military forces of either Nordic nation. In fact, the general condition of the Norwegian armed forces was woefully inadequate to meet the looming threat from Germany in the south.® In the years following the end of the First World War, and the general optimism surrounding the founding of the League of Nations, Norway's defence forces had been allowed to fall into a general state of disrepair. For example, the new defence organisation instituted by the Norwegian government in 1933 reduced the number of regular officers and NCOs from 3,750 to 470 men, and the number of units available for mobilisation fell from six divisions to only six brigades. Not only were the forces relatively small, it was estimated that a total mobilisation would take at least 12 to 14 days, especially if a partial mobilisation was initiated first and was carried out via the national mail service. Furthermore, although prior to the war the Norwegians increased the duration of compulsory service from 48 to 84
days, it languished well behind those of Denmark and Sweden which required 190 and 175
days respectively. With regard to the Norwegian Navy, things were not much better. To
cover its 2,600 kilometre long coastline Norway had only 63 warships, the bulk of which
were museum pieces launched between 1874 and 1918, and only five worthy of the term
“modern.” The Norwegians’ overall deployment of these naval vessels was not conducive
to defence either, because in order to monitor their territorial waters and uphold their
neutrality, they were spread thinly over the entire length of the coast. Thus, should with an
invasion take place they could not be deployed in strength quickly. The Norwegian navy
also controlled three naval defence districts, which included coastal artillery forts. However, these were manned only at one-third strength due to the Navy’s belief that the
Germans would not attempt an operation in the face of overwhelming British naval
superiority, and that the Allies for their part, had no intention of invading Norway.
Although the Germany Navy was aware of strong fortifications at Oslo fiord (including a
number of heavy guns of up to 28-cm calibre) and medium defensive installations at
Kristiansand, Bergen and Trondheim (some guns of up to 24-cm calibre), in general the
Germans considered the coastal defences inadequate and antiquated. As for an
independent air force, this simply did not exist. Both the Norwegian Army and Navy had
minuscule numbers of aircraft of mainly older design, totalling around 150 aircraft, of which
barely 20 could be considered modern and of any threat to German transport aircraft in the
operation. Overall, the Soviet-Finnish War did spur attempts to prepare Norway for a
possible conflict, such as the strengthening of the Oslo fiord fortifications and the placing of
orders for fighter aircraft from the United States and Italy. However, it was too little, too
late. The Norwegian government simply lacked the “necessary energy and haste” for the
major construction of defensive installations, and in the case of the aircraft, events soon
overtook the orders.

Similarly, the Danes were ill-equipped to meet the German onslaught. Although in
late 1932 the Danish government initiated a major rearmament programme, it, like Norway,
lacked the necessary energy to carry it through, and in any event such efforts were
superfluous. The overwhelming scale of the Third Reich’s rearmament programme,
coupled with Denmark’s strategic vulnerability on Germany’s doorstep, and its insignificant
size and the lack of any natural barriers to impede an invading army, all but nullified any
Danish preparations. Ironically, it was this very point—Denmark’s vulnerability—reasoned
Danish leaders, which made any active military action by Hitler against Denmark highly
unlikely. What the Danes, however, had not seriously taken into account was the fact that
they might be used as a stepping-stone for German forces on the way to Norway. Consequently, in 1940 its Army was small in number, while its Navy was essentially a defensive force designed either for coastal operations or looking after Danish concerns in the Faroes and Greenland as well as its extensive fishing interests. For the most part, its small army and naval air forces (numbering in total around 70 aircraft) were made up of obsolete biplanes, mainly of British or Dutch manufacture, that were ponderous and insufficiently armed to match anything the Luftwaffe could put into the air in 1940.\textsuperscript{103}

The Luftwaffe

On 20 March 1940, the covering order for \textit{X Fliegerkorps} was issued, detailing the wide-ranging part the Luftwaffe would play in the up-coming "lightning occupation":

The support of the land and sea operations for the seizure of Norway and Denmark through: aerial demonstrations, paratroop operations as well as transportation of airborne army units. It is responsible for breaking any enemy resistance which might arise, providing covering fire for disembarked units against air attack and fighting off an eventual interference attempt by a British airborne operation and/or naval forces.\textsuperscript{104}

Given the numerous tasks involved, and the eclectic range of aircraft and personnel required, plus the one-off nature of the invasion, the flexible organisational structure of the Luftwaffe \textit{Fliegerkorps} was ideally suited to the demands of \textit{Weserübung}. Although in most instances during the war, a \textit{Fliegerkorps} operated under the overall leadership of a \textit{Luftflotte} (air fleet; the largest self-contained air command in the Luftwaffe), at other times it could function autonomously as deemed necessary by the Luftwaffe High Command. Moreover, as the structure of a \textit{Fliegerkorps} was often determined by the immediacy of its given task at any one time, its numbers could vary considerably over relatively short periods and between individual \textit{Fliegerkorps}. Despite this fluidity of size and composition, all \textit{Fliegerkorps} were made up of commonly designated and structured subordinate elements. The smallest of these air units were the \textit{Staffeln} (Squadrons), each typically comprising nine aircraft. Next, a force of three squadrons made a \textit{Gruppe} (Group), which, when the three aircraft of the group headquarters staff were added, amounted to a total strength of 30. In turn, three Luftwaffe groups, totalling some 90 aircraft, made up a typical \textit{Geschwader} (Wing), which were formed principally around particular types of aircraft. For example, a wing composed solely of bombers was known as a \textit{Kampfgeschwader} (KG), a wing of dive-bombers as a \textit{Stukageschwader} (StG), a wing of twin-engined fighters as a
Zerstörergeschwader (ZG), and a wing of single-engined fighters as a Jagdgeschwader (JG).

Although prior to *Weserübung X Fliegerkorps* was a relatively small entity, it would be considerably strengthened with additional air combat units, and augmented by increased numbers of reconnaissance and transport aircraft for the invasion of Norway and Denmark. The small, but potent core of *X Fliegerkorps* was the aircraft of KG 26 and KG 30; of which, the former comprised three groups of the shark-like Heinkel He 111 bomber, and the latter, three groups of the Luftwaffe’s latest and fastest bomber, the Junkers Ju 88.\(^{105}\) The crews of these twin-engine aircraft were ideally suited to the task at hand because of experience gained over the sea in the economic war waged against Britain since the autumn of 1939. For example, since the outbreak of the war, *X Fliegerkorps* had been engaged in deep forays against British naval and maritime vessels, reaching as far as the Royal Navy’s main base at Scapa Flow.\(^{106}\) Under the seasoned Geisler, who had originally been head of the Naval Air Command (*Führer der Marineluftstreitkräfte*) before joining the Luftwaffe, many *Fliegerkorps*’ personnel had been versed in air and naval co-operation through exposure to a modicum of naval training and joint operations.

Geisler had joined the navy in 1910 and moved steadily up the ranks, often into positions which focused on the German Navy’s small but vital air arm. Described later in the war as “a most competent officer” by Generalfeldmarschall Albert Kesselring, he proved an invaluable asset to the Luftwaffe in air operations over open waters not only off the Norwegian coast but also those surrounding the British Isles and, later in the war, over the Mediterranean.\(^{107}\) For *Weserübung* his units were supplemented by one group of He 111s from KGr 100 and two groups of He 111s and one group of Ju 88s from KG 4 (*General Wever*).\(^{108}\) On the day of the invasion, the bulk of these forces stationed at northern German airfields, would, at the highest level of operational readiness, prepare to carry out the Luftwaffe’s most important task: the securing of Norway and Denmark against any British attack or landing operation.\(^{109}\) Over the following days, small individual elements would then be pushed into forward positions at captured Danish and Norwegian airfields to increase air cover as far north and westward as possible. It was conceivable that even in the early stages of the invasion, units of the Royal Navy, which was at least five times as powerful as its German counterpart, could attempt to penetrate the fiords of Narvik, Trondheim or Bergen in an attempt to destroy weaker German naval units and ground forces still in the process of consolidating their positions.\(^{110}\) Even worse, in the eyes of German planners, would be an Allied counter-landing executed under covering fire from
the sea against German vanguard troops. Moreover, even if British warships did not attempt such an action they could very well, just by their presence, trap German ships within the fiords. Although in southern Norway this possibility was remote, given the proximity of German airfields in the region, in western and northern Norway it was a very real danger. Consequently, the Luftwaffe had to ensure vital “flank protection” for the German naval units (Gneisenau and Scharnhorst along with ten destroyers) against the might of the Royal Navy in northern Norway, especially their homeward voyage. Further, in these northern and western extremities it was also hoped that the Luftwaffe’s mere presence would frighten off the British fleet once the German warships had left, in order to facilitate the consolidation of the initial landings; especially the setting up of strong naval batteries at the entrances to the fiords.

Alongside U-boats, the “eyes” of the operation in waters off the Norwegian coast (inclusive of the Orkney-Shetlands region) were the Luftwaffe’s long-range reconnaissance aircraft. Most of these were He 111s of X Fliegerkorps’ Fernaufklärungsgeschwader 122 (long-range reconnaissance wing 122, (F)/122) and were assigned to observe enemy naval forces and then direct the Korps’ bomber forces in for the kill. Particularly intensive reconnaissance of the Oslo, Kristiansand, Egersund, Stavanger and Bergen areas was to be carried out by a squadron of (F)/120 equipped with He 111s and Dornier Do 17s. In addition to these Luftwaffe air units, the naval aircraft of Küstenfliegergruppe 506 (coastal reconnaissance and naval support group, KuFlGr 506) were subordinated to X Fliegerkorps so that its Heinkel He 115 floatplanes could cover inland fiord waters. Overall though, the numbers of aircraft assigned to this extremely important task would prove to be dangerously inadequate. In total, only about 20 to 25 operationally ready long-range reconnaissance aircraft and 20 to 25 naval support aircraft were at X Fliegerkorps’ disposal for surveillance of the entire region of the North Sea, southern Norway and the approaches to the lengthy Norwegian and Danish coastlines. In addition to the small numbers involved, although some of these squadrons were designated “long-range”, in terms of maritime warfare their range was actually woefully poor—a weakness the British were to exploit at Narvik. Moreover, in the months and years that followed, the lack of significant numbers of long-range aircraft within the Luftwaffe’s inventory would be the single most important factor in determining the usefulness or otherwise of Norway as a base for German air operations against Britain and the war at sea as prescribed in Hitler’s directive for Weserübung.
Of the bomber forces, a handful would engage in aerial demonstrations as part of the Germans’ psychological attempt to weaken the will of the Norwegian and Danish governments and frighten them into submission. This was at least partly based on the perceived psychological influence achieved by similar demonstrations of aerial prowess over Czechoslovakia and Austria in March 1939.\textsuperscript{117} It was not an unreasonable proposition, as many European countries had been blasted with German propaganda extolling the power of the Luftwaffe in the latter years of peace, propaganda which seemed all too accurate when one considered the terror produced by Luftwaffe dive-bombers on hapless Polish civilians only months before.\textsuperscript{118} To reinforce this very point, only a few days before the invasion Dr. Curt Bräuer, the German foreign minister to Norway, would show a select Oslo audience the official German film of the invasion of Poland, \textit{Baptism of Fire}, which included footage of the bombing of Warsaw.\textsuperscript{119} Hopefully the lessons from this film would not be lost on the audience, when, in a show of strength on the day of the invasion, small numbers of Luftwaffe bombers and fighters would attempt to encourage a “friendly occupation.” For this purpose, a bomber group escorted by twin-engined fighter-bombers, the long-range Messerschmitt Bf 110, would fly over Copenhagen and Jutland. In Norway, two bomber groups and a few Bf 110s would demonstrate over Oslo and a further bomber group, also supported by Bf 110s, would parade German aerial supremacy above Kristiansand-Bergen and Stavanger. However, should these aerial exhibitions, accompanied by leaflet drops, fail to cow the two Scandinavian nations into submission, these units would be thrown into the fray against any resistance that should arise.

In addition to escorting demonstration aircraft, two groups of Bf 110s (I./ZG1 and I./ZG76), plus a group of the predatory single-engined Messerschmitt Bf 109 fighters (II./JG77), formed an important component in protection of air transports in the assault on Danish and Norwegian airfields and protection of these bases as forward operation bases from which German bomber aircraft would range against British naval forces.\textsuperscript{120} Nevertheless, although combat aircraft such as these fighters often find themselves at the forefront of air power analyses, transport aircraft were assigned an equally important role in the campaign by carrying out a massive airlift operation to secure Germany’s foothold on Norwegian soil.

The Air Assault and Consolidation

The German campaign in Norway was the first attempt to utilise transport aircraft in the delivery of paratroops and air-landed forces, followed by light flak units, supplies and
reinforcements into the very forefront of battle. During _Weserübung_, the Luftwaffe’s air transport forces had four main tasks.\textsuperscript{121} First, the speedy and timely delivery of paratroops and air-landed forces into live combat areas. Only through the application of air power could the most important airfields could be captured quickly enough to enable further use by Luftwaffe units in support of the Navy and the Army. The unexpectedness of such assaults was deemed the best way of catching defenders off-guard. Second, German planners acknowledged that air transport offered the only viable means by which isolated areas could be quickly provisioned and reinforced; especially once the warships and transports had left northern and central Norway for home waters. Third, given the distance between Germany and the widely-dispersed objectives, the escorting Bf 110s and Bf 109s (designed for short range tactical operations) were reliant on the first wave of transports to deliver necessary supplies of aviation fuel, ammunition, servicing equipment and personnel to enable them to immediately operate from the recently occupied airfields. As the writer of a popular OKW propaganda publication noted after the campaign:

> A fighter wing goes north! A simple thing most people would think. One seats oneself in the machine, travels with the speed of the birds and in an hour travels perhaps 500 kilometres and is there. The reality is different. A fighter unit is organised like a regiment. Numerous teams are essential for the ground organisation, for the maintenance of engines, batteries, and the delicate weapons.\textsuperscript{122}

Finally, on _Weser_-day and in the days following, this initial work would be augmented by a continued airlift involving not only additional fuel and equipment but also the ferrying in of troops and command staffs in order to oversee consolidation of German positions. The importance of provisions via airlift in the immediacy of the invasion was doubly important because planners realised that the plundering of local supplies by German forces would be detrimental, not only to the overall hope of portraying the invasion as a “friendly occupation”, but also to the local Norwegian economy which was heavily dependent on overseas supplies of mineral oil, bread grains, foodstuffs and textiles. Thus, orders declared that local stocks were only to be used in emergencies, and then paid for. Indicating that the Germans intended to stay for a lengthy period, it was further noted that whatever useful supplies were found would be reserved for the OKW or “civilian plenipotentiaries nominated by the Führer.”\textsuperscript{123}

Administratively, the organisation and preparations for the airlift were placed within the command of Geisler’s _X Fliegerkorps_, within which were established the offices of the Air Transport Chief (Land) and the Air Transport Chief (Sea). The latter of these two commands was a relatively minor player in the proceedings as its forces consisted of only 22
twin-engined Heinkel He 59 floatplanes and a smattering of Junkers Ju 52s equipped with pontoons. However, *Oberstleutnant* Carl August Freiherr von Gablenz, the Air Transport Chief (Land), was assigned a pivotal role in the proceedings. The directive for the Transport Chief (Land) placed the Air Transport Groups KGzbV. (*Kampfgeschwader zur besonderen Verwendung*, bomber wings for special duties) 101, 102, 103, 104, 105, 106 and 107 under Gablenz's command. It should be noted that these transport wings, despite being designated "bomber wings", were composed exclusively of ubiquitous triple-engined Ju 52 transports and differed from normal combat wings in that they were only made up of three squadrons, numbering 53 aircraft in total. The sole exception to this organization was KGzbV 105, composed of two squadrons of Ju 52s and a third made up of four-engined Junkers Ju 90 and Focke-Wulf Fw 200 heavy transports, and a single four-engine Junkers G 38. In addition to these units, Gablenz also had the first, second and third groups, and an additional two squadrons of the First Bomber Wing for Special Purposes at his disposal for the most important and possibly most difficult part of the airborne operation. It was the air transport units of this wing, flying some 160 aircraft, which would converge on Aalborg, Oslo and Stavanger laden with elite German paratroopers. The remaining transports, approximately 340 in all, would deliver the airborne reinforcements, light flak units, supplies and equipment once the airfields were secured. In total, Gablenz had some 500 transport aircraft at his disposal, the most that had ever been brought together for a military operation.

Unlike their Anglo-French enemy, the Germans had placed a great deal of importance on the development of a sizeable air transport fleet. The Luftwaffe had noted the successful exploitation of transport aircraft by the British during the disturbances in Cyprus in 1931 and the skirmishes in Iraq in 1932. Further displays of the effectiveness of such airlifts occurred in the Chaco War (1932-34) between Bolivia and Paraguay and later in the Italian Abyssinia Campaign of 1935-36 where troops, supplies and wounded were all moved by transports. Consequently, astute air power experts in Germany realised that the possibilities of transport aircraft could, if exploited correctly, change the "essential features of the picture of war."

Aircraft, however, could not continue indefinitely to meet all of the Luftwaffe's requirements in Norway. Consequently, they were apportioned ten sea vessels from the 1st Naval Transport Group to carry supplies, ammunition and personnel to Oslo, Kristiansand, Stavanger and Bergen. On top of this, three aircraft tenders would deliver mines, bombs and high octane gas to Stavanger and Bergen, and a further four smaller tankers laden solely
with octane gas would make their way to Oslo, Stavanger, Bergen and Trondheim. The single largest delivery of 30 railway trucks loaded with fuel for the Luftwaffe would be made by the 10,397 ton tanker Friedrich Breme of the 3rd Naval Transport Group, and in the days following Luftwaffe supplies would continue to be delivered by the 5th and 8th Naval Transport Groups.

Crucial to achieving surprise and the prompt delivery of paratroopers, airborne units, and supply materials was the tight schedule the transports had to work under. To ensure that Allied suspicions were not aroused, these aircraft were to transfer from their respective home bases to the assembly airfields in northern Germany at Oldenburg, Bremen, Hamburg and Schleswig-Holstein only three days prior to the invasion. Moreover, to avoid loose lips broadcasting German intentions, the briefing of the transport crews would only commence on the evening prior to Weser-day. On Weser-day itself, perfect timing was critical. For example, the paratroop landings at Fornebu were set at Weser-time plus 185 minutes, which gave the paratroopers only 20 minutes to secure the airfields before the arrival of the transports bearing airborne units at Weser-time plus 205 minutes.129 To facilitate the rapid and frictionless arrival and departure of transports, the closest liaison between the commander of the transport groups and the officer in charge of the paratroopers was to be maintained at all times. Contact here, and throughout the campaign, was to be facilitated by the establishment of a comprehensive Luftwaffe Communication Service (Luftnachrichten-Truppe) force totalling 51 officers, and 3,145 non-commissioned officers and men.130 To get a better picture of the careful planning and precision of execution required by the air transport units in co-operation with the combat aircraft, it is at this point germane to examine in detail each of the proposed Luftwaffe operations.

The ability of the Luftwaffe to carry out its most important task (the interception of British naval forces) was dependent on securing airfields in Norway and Denmark, thereby removing some 500 to 650 kilometres of flying distance from sorties against Allied warships and aerial support of isolated ground forces in the north.131 This would not only increase the range of the German aircraft, but also allow for a reduction in the amount of fuel required on any given mission which in turn would mean a greater quantity of bombs could be carried. Realistically, the Germans could only expect to utilise four main airfields initially: the Danish Aalborg West and East airfields at the northern tip of the Jutland Peninsula, as supporting bases for operations in Norway; the Fornebu airfield which would support the army in combat around Oslo; and Stavanger’s Sola airfield, which would act as a central air base in the region for naval support and harassment of British warships.
With regard to logistics and strategic considerations, German planners believed that the northern Danish airfields represented an “exceedingly important” link in the movement of forces and material between Germany and Norway, as well as the major staging post for Luftwaffe raids against British sea forces. Danish defences here were considered weak at best, and Luftwaffe intelligence suggested that Jutland was only covered by a single squadron of some 15 obsolete Hawker Furies based at Okabol. As for flak defences, these were almost non-existent in northern Jutland, since Danish defensive positions, such as they were, were concentrated in the Zeeland region and southern Jutland. Intelligence therefore concluded that the prerequisites for investment of the Danish airfields appeared “very favourable.” Consequently, air transports under the relatively weak protection of Bf 110s, would make the first drops of paratroopers at the airfields of Aalborg West and East within two hours of the German troops crossing the Danish frontier. The paratroops were to secure Aalborg West in preparation for the arrival of transport aircraft bearing army airborne units. To achieve this they were to gain control of all sectors of the field, especially towards the township of Aalborg; prevent any aircraft present from taking off; and occupy the airport buildings to prevent communication with Aalborg East. Any Danish guards were to be disarmed and nationals of enemy countries detained. All refuelling facilities and aviation fuel stocks were to be guarded against intentional destruction. Once completed, landing-crosses were to be laid out and swastika flags erected to show the all-clear.

The paratroop drops would then be followed up by air-landed troops. Elements of these would advance on Aalborg East. To make these fields serviceable as early as possible, the next wave of transports would include refuelling companies, an airfield command staff, and ground personnel, thus facilitating the rapid turn-around of transport and combat aircraft. Arriving alongside the transports, special purpose signals aircraft would control local air traffic and maintain close radio contact with the Fliegerkorp’s command post. These signals aircraft were essential for managing the extensive air traffic of German bombers, escort fighters and transport units expected to hold sway over the whole of Jutland and the western approaches to Danish coastal waters on Weser-day. It was envisaged that once refuelled and rearmed, the escorting Bf 110s would operate out of Aalborg flying escort for air transports moving between Aalborg, Stavanger and Oslo. By midday, these would be followed by a small detachment of Stukas ready to do battle with the Royal Navy. What the Aalborg fields had over their Norwegian counterparts—Oslo and Stavanger—aside from this initial airborne arrival of personnel and materials, was that
they could be immediately provisioned with aviation fuel, bombs and munitions by rail from Germany once the region had been secured.\textsuperscript{134}

Out of the sprinkling of airfields around Oslo, the Germans selected the commercial Fornebu field for the surprise landing by two parachute companies. Its proximity to the Norwegian capital and the fact that it was nearing completion as Oslo’s new commercial airport made Fornebu ideal as an operational base for Luftwaffe support of Army and Navy.\textsuperscript{135} As at Aalborg West and East, the orders made the parachute companies responsible for gaining the initial foothold and breaking any local resistance. Once captured, the airfield would become the point of entry for a number of regional operations staffs, including those of Falkenhorst, the 69th Infantry Division, and the 193th Infantry Regiment. Added to this, air transports would ferry in two battalions of the 193th Infantry Regiment and a platoon of the Army Air Force Battery of the 169th Artillery Regiment without equipment. A further two army batteries were to be delivered by air on the following day. Once secured, a bomber squadron of KG 26 which had been demonstrating over Oslo, would make a stop-over landing at the field while another KG 26 squadron would make the airfield its operating base.\textsuperscript{136}

Although there was little danger of meeting significant aerial opposition in the entire campaign, Luftwaffe planners were aware that of all the possible trouble-spots, Oslo was the most likely. At Oslo’s Fornebu airfield, Luftwaffe intelligence believed the Norwegians had a squadron of 12 Gloster Gladiators, while north of the capital lay the largest military air base in Norway.\textsuperscript{137} At the Oslo-Kieller-Lilleström field the Norwegians had stationed two squadrons of 20 old Fokker CVs and a fighter squadron of about 20 obsolete Hawker Furies. Moreover, the Germans maintained that Oslo had the only flak garrison in Norway, although its weaponry was judged to be “completely unsatisfactory and not modern.” The only other area of minor concern was the main Norwegian naval air base situated at Horten near the entrance to Oslo Fiord, where no more than 25 aircraft of varying antiquity were believed to reside. While the only relatively modern aircraft were six German He 115 floatplanes, of greater import were the expanded coastal fortifications. Luftwaffe intelligence advised that modern flak defences in the inner coastal defences could be reckoned on, while the focus of central fortifications, known as the “Oslo Fortress”, was based around the Horten emplacements.\textsuperscript{138}

The assault on Stavanger contained most of the essential elements of the Aalborg and Oslo landings. Transported by Ju 52s and escorted by Bf 110s, a platoon of paratroopers were to jump over Stavanger’s Sola airfield and secure it for the landing of an
Deployed troops were warned of resistance, particularly from the western approaches to the airfield where it was believed that some 150 Norwegian troops were stationed. Lying closest to the British coastline, it was envisaged that the Sola airfield would be the first to bear the brunt of early British air strikes and possibly even an airborne operation. Therefore, it was of major importance at Stavanger that flak protection against British air attack be set up quickly. Because the arrival by ship of two flak companies could not be expected until the following day at the earliest, the paratroopers were to establish Flak protection against “deep attacks” by British aircraft to bridge this period. Once the airfield was operational, one bomber squadron from KG 26 and one Bf 110 squadron from ZG 76 were to land and prepare for further orders. It was also hoped to bring in one squadron of Stukas of StG 1 to operate against British naval forces in Norwegian waters and the Skagerrak.

Smaller Luftwaffe operations were envisaged for Kristiansand, Bergen and Trondheim. At Kristiansand, a small industrial town of some 20,000 inhabitants and a minor naval air base, the attack was to be supported by a special paratroop company (less one platoon) which would be followed up the next day by the air transport of an army battalion. Although the naval base was an insignificant threat to the overall operation, the Germans felt that it represented an important link in tactical operations as the next airfield was some 160 kilometres distant at Sola. The assault on Bergen, the second largest Norwegian city with a population of some 100,000, involved the air delivery of a mountain battalion, an infantry regiment (less one company) and a company of engineers. Similarly, these would be followed up on 10 April by the air delivery of reinforcements. In addition to these ground forces, the Luftwaffe would station a multi-purpose squadron of Kü.Fl.Gr 506 at Bergen as an advanced element for aerial reconnaissance and to protect the most important harbour on Norway’s central west coast, a logistically valuable point because of its rail link to Oslo. At Trondheim, with a population of 60,000, the Navy and Army forces were to be supported by two squadrons of Kü.Fl.Gr 506. These aircraft were to make sea landings there once a thorough reconnaissance had been carried out. Trondheim’s land-based airfield, Vaernes, was to be taken by troops delivered by naval vessels and made ready for incoming air transports and further aerial operations. Moreover, they would form the initial aerial link with the most distant forces in the Narvik operation.

Kü.Fl.Gr 506 gave X Fliegerkorps a considerable degree of tactical flexibility. This was especially true where its seaplanes were able to land in fiords in distant regions where land-based fields were either unsuitable or simply non-existent close to the point of action.
Seaplanes could also greatly increase the operating radius of the Luftwaffe north of Trondheim because, unlike their land-based counterparts, they were not limited by the need to conserve fuel for a return flight when suitable airfields were not available. For all these reasons it was felt that the closest coordination of all Luftwaffe activity was essential and therefore, KühGr 506 was taken from the Naval Air Command West and placed directly under Geisler’s air corps.

Naval Air Command West and Naval Air Command East nevertheless were to play their own parts in the up-coming campaign. The former was detailed to work alongside X Fliegerkorps with five flying boat squadrons of KühGr 508 and a handful of Dornier Do 26 flying boats from the Transatlantic Squadron in reconnaissance in the North Sea. The Naval Air Command East, on the other hand, was to protect the vulnerable Naval Transport Squadrons from enemy submarine attacks in the Skagerrak.

When the balance of aircraft operated by Naval Air Commands West and East are added to all others it becomes apparent that the Germans had placed a large number of various aircraft types at the disposal of X Fliegerkorps with a total over 1,000 machines. How these units would be assembled and deployed alongside naval and ground contingents in the days leading up to 9 April was neatly summarised in the following operational outline:

The first tanker to put out for Trondheim on W-5 day (4 April) will, the next day, be followed by the “export squadron” bound for Trondheim and Narvik. Disembarkation of the Army forces in the landing ports will by this time be completed. On 6 April, the first naval transport squadron will leave Stettin and the naval forces of the Transport Groups, composed of battleships, cruisers and destroyers, some with troops and gear on board, will leave Cuxhaven during the evening of 7 April. Their passage will be assured by the reconnaissance of Naval Air Commander West and X Korps; Naval Air Commander will be on anti-submarine patrol.

On 6 April, the Air Force will assemble the transport Gruppen; on the next day 11 transport Gruppen will assemble in the ports of departure; on 8 April the Paratroop Transport Gruppen will be ready.

The Countdown

The success of this initial naval phase was dependent on knowing as accurately as possible the strength and disposition of the British Fleet at all times. Consequently, a number of aircraft from Naval Air Command West and X Fliegerkorps had been deployed in reconnaissance in the days leading up to the invasion in an area stretching from the entrance of the Skagerrak into the North Sea and over the waters of Scapa Flow and its environs. This latter area was home to a considerable number of the British Fleet and as such, represented a significant threat to Weserübung’s western flank. The monitoring of these
enemy units was not easy. For example, a number of missions had to be curtailed due to poor weather, such as those made on 28 and 30 March, while others, such as the flight by three long-range He 111s of (F)/122 over the Orkneys on 31 March 1940, met with enemy aircraft and heavy anti-aircraft fire from light shore and naval defences. Despite these difficulties, a rough picture of the Royal Navy's dispositions could be gauged from the results of photo-analysis and radio intercepts. In all, it was estimated that Allied naval strength in the North Sea consisted of approximately five British and two French battleships, 14 British cruisers (and one French cruiser moving into the region), one or two aircraft carriers, and about six destroyer flotillas, as well as 15 to 29 submarines.

In the first week of April, the Luftwaffe continued to carry out active reconnaissance over Scapa Flow in conjunction with sorties by aircraft of X Fliegerkorps against convoys plying the waters between the Scandinavian peninsula and Britain. While the latter operations constituted a continuation of Germany's economic war against Britain, the raids on Scapa were designed not only to gather intelligence but follow up the Luftwaffe's successful mid-March raid which had resulted in the temporary evacuation of Scapa Flow from 19 to 26 March as the Home Fleet took to sea. Due to the proximity of Scapa to the Norwegian coast, it was an ideal operational base from which to patrol the 500 kilometre wide northern entrance to the North Sea and, as such, offered a major threat to the German invasion. Although the Germans could not expect subsequent forays to achieve the same glowing results, they hoped to keep the British out of range while preparations for Weserübung drew to a close. The results of these raids were, however, often mixed. Although the 2 April attack made by ten planes of KG 30 observed that three light cruisers, plus destroyers and auxiliary vessels were in Scapa, no hits were made due to a technical problem which hampered the bomb release gear on several of the aircraft, and also because of the light and heavy anti-aircraft fire that swept up to meet the German intruders. One of X Fliegerkorps's planes was brought down at Scapa and a further aircraft was lost over Germany on the return flight. At the same time as this raid on Scapa, 11 planes of KGr 100 attacked British convoys east of the Orkney and Shetland islands with similarly dismal results. The next day, reconnaissance aircraft spotted a convoy escorted by one cruiser and six destroyers north of Viking Bank. X Fliegerkorps initially dispatched ten aircraft of KGr 100 and KG 30 and then decided to throw a further 17 planes of KG 26 into the fray off the Orkneys. The aircraft severely damaged or sunk two patrol boats off Britain's east coast and two patrol boats north-west of the Shetlands. Two steamers also suffered badly at the hands of the Luftwaffe and one destroyer was hit on her deck. Three more steamers and
one further patrol boat were reported damaged while the German losses amounted to three aircraft.

The following day the first tanker bound for Trondheim slipped its berth and on 5 April the “Export Group” of transports left Germany. On the morning of 7 April, the heavy cruiser Hipper, 14 destroyers and the battle-cruisers Scharnhorst and Gneisenau of Groups 1 and 2 were building up steam on their way to Narvik and Trondheim. Reconnaissance between the Shetlands and Norway for this formation was provided by 18 Dornier He 18s flying boats and three Heinkel bombers under the Naval Air Command. Similarly, when more warships and supply vessels started out for Kristiansand, Bergen and Oslo, the Naval Air Commander West put one Do 26 up over the northern Shetlands islands-Norway region, seven Do 17s over the eastern region of the central North Sea, and nine aircraft of X Fliegerkorps’s (F)/122 west of these forces.

Aerial reconnaissance however, could not prevent the first sighting by the British of the German flotilla making its way to Trondheim and Narvik. On 6 April, two high flying reconnaissance Spitfires had returned to Britain with evidence of a major naval build-up at Wilhelmshaven, which included Hipper, Scharnhorst and Gneisenau. The movement of these vessels to the north of Heligoland was recorded by British aircraft that night and the British attempted to locate them the following day with planes of Coastal Command. In the early hours of daylight, a Coastal Command Hudson successfully spotted Hipper and her destroyers. The subsequent air attack by 35 Blenheims achieved only a handful of near misses and 24 Wellingtons which followed were thwarted by low cloud. Bf 110’s of X Fliegerkorps then fell on the Wellingtons on their return flight, shooting down two aircraft and heavily damaging others for the loss of one German aircraft.

Of greater threat to the German expedition was the decision by Admiral Charles Forbes, Commander-in-Chief of the British Home Fleet, to dispatch his forces from Scapa Flow to engage the enemy units. However, the Germans’ assessment that the British were not fully aware of their actual intentions proved correct. Based on wireless intercepts the German Naval Staff concluded that the “Admiralty has not yet drawn conclusions about a large scale German action within Weserübung from the air reconnaissance information, but rather expects a break-through into the Atlantic by a pocket battleship.” Indeed, despite the unsettling amount of information accumulating (including RAF air reconnaissance reports), which showed massive shipping movements taking place in the Baltic and the Heligoland Bight and large numbers of Ju 52 transports amassed around Kiel, it did not dawn on the British Admiralty that the Germans were in the throes of carrying out an
invasion of Norway until it was too late. Blinkered by the belief that the Germans could never operate on a large enough scale to carry out such an invasion while Britannia ruled the waves, Forbes was duly informed on 7 April that "all these reports [of German shipping movements] are of doubtful value and may well be only a further move in the war of nerves." Despite this, Forbes, on his own initiative, set elements of the Home Fleet on a north-easterly course at high speed with a view to intercepting a presumed break-out into the Atlantic. Although it left the central North Sea and the Norwegian coastline uncovered and arrived too late to intercept Groups 1 and 2, it did place naval vessels at sea with a view to engaging German warships.

Yet vessels of the Home Fleet were not the only threat to the German men-of-war steaming up the Norwegian coastline, as the British also had Royal Navy units in the area secretly laying mines inside Norwegian territorial waters in accordance with Operation Wilfred. The Germans only became aware of this development on 8 April, when the British and French governments declared their intention to exclude German shipping from unimpeded use of parts of Norwegian territorial waters by minelaying. They also announced that in order to prevent Norwegian shipping falling victim to the fields, British naval units would, at least for the next 48 hours, patrol these areas. The British claimed to have laid mines in Norwegian waters in the approaches to Vestfiord north of Bodø, off Bud near Molde, and further south off Stadland. In reality they had only mined the approaches to Vestfiord. The "field" off Bud was merely a ruse, and the vessels deployed to lay the Stadland field were recalled before they were able to commence laying mines. This Anglo-French mining venture was both a blessing and curse to the Germans, because although, as the German Naval Staff war diary pragmatically noted, it was "politically welcome since it gives excellent grounds to the outside world for German actions as a counter-blow to the British violation of neutrality", operationally it was unwelcome, because the presence of British naval vessels in Norwegian territorial waters threatened the movement of German tankers.

Nevertheless, the British made two crucial decisions that would greatly favour the successful execution of Weserübung. First, at 1045 hours on 8 April, the Admiralty ordered the Vestfiord minelayers and their escort to rejoin the covering force, headed by the battlecruiser Renown and light cruiser Penelope, and therefore well clear of the Norwegian coastline. This now meant that they were no longer in a position to discover and intercept the German force which was due to pass directly by them. Second, and more importantly, the Admiralty commanded that, given the strength of the German force at sea, every ship
was needed for fleet operations. Originally, the British had recognised that the mining of Norwegian territorial waters could act as a trip-wire to German retaliatory action in Norway, which in turn would pave the way for Plan-R: the landing of British and French troops in Norway. Therefore, while the mining was being completed a number of vessels in Britain remained on stand-by laden with troops for just such an eventuality. Quite independently and in spite of the fact the Home Fleet already greatly out-gunned their German adversaries, Churchill ordered these ships to disembark their expeditionary force (originally destined for Stavanger) by 1400 hours and set a course to join the Fleet. Moreover, a light cruiser and six destroyers assembled at Clyde to provide cover for a force intended to bring troops to Trondheim and Narvik were also released to the Home Fleet. Ironically, given his past enthusiasm for such an adventure, Churchill deprived the Allies of the possibility of making timely and perhaps decisive counter-landings when it became clear that the Germans were carrying out a full-scale invasion of Norway.

British efforts were also hampered by misleading German naval manoeuvres coupled with poor weather. On 8 April, Hipper encountered, and after being rammed, sank the British destroyer Glowworm which had been part of the Renown’s minelaying escort group. At the conclusion of this engagement, Vizeadmiral Lütjens, the commander of Group 1’s covering force—Scharnhorst and Gneisenau—realised that the action with Glowworm would now be known to the Admiralty. Hence, when a report came in that a German Do 26 long-range reconnaissance aircraft had sighted a British force consisting of two battleships, one heavy cruiser and six destroyers, he decided to complete his operational duties by escorting the ten destroyers en route to Narvik. It was at this point that Groups 1 and 2 separated and made their way to their respective destinations. However, at the conclusion of its confrontation with Glowworm and after detaching from the main group of north-bound warships, Hipper and its four destroyers set a westerly, rather than easterly course, because it was too early to put into Trondheim. At 1530 hours, a British flying boat spotted Hipper and its entourage on this deceptive course. Admiral Forbes took up the chase and changed to a northerly and then north-westerly course, thus moving the Home Fleet further and further off the Norwegian coast and away from the impending invasion. Aside from this isolated and rather misleading sighting, rain and heavy cloud prevented British Sunderlands and Hudsons from spotting any of the sizeable collection of German vessels along the Norwegian coastline making their way to Bergen, Egersund, Kristiansand, Arendal and Oslo on the day before the invasion.
Meanwhile, at 2100 hours nearing the entrance to Vestfiord on 8 April, Lütjens broke away from the destroyers bound for Narvik and set Gneisenau and Scharnhorst first on a westerly and then a north-westerly course into the teeth of a building gale. Thus Lütjens set about fulfilling his other orders: to cover the westward flank of the destroyers operating in Narvik and divert Royal Navy forces in the region. Within eight hours and at 0449 hours on Weser-day, Gneisenau's radar detected an enemy ship only 20 kilometres distant. Thirty minutes later, both she and Scharnhorst were caught in a running duel in snow squalls and heavy seas with Renown and the destroyers of the Vestfiord minelaying force. Only 18 minutes into the battle Renown hit Gneisenau, destroying the gunnery control in her topmast, while a further hit resulted in a leak in turret A, culminating in a complete electrical failure; Scharnhorst, although not hit, had her A turret flooded. Despite commanding newer, faster, and better armoured ships, Lütjens appears to have believed that he faced two British battleships, perhaps due to the numerous flashes given off by the supporting destroyers. In order to bring his ships back into battle readiness, he decided to break off the attack, increasing speed and heading north-east, finally shaking off Renown at 0730 hours. Lütjens' brush with the enemy had hardly been glorious, but he could, at least for the time being, confidently assume that he had carried out his mission to divert British attention away from the landings that were to follow.

Less dramatically, the six groups of warships with the assault forces for Narvik, Trondheim, Kristiansand, Bergen, Oslo and Egersund proceeded uneventfully to their operational targets as planned. Additionally, the 1st Sea Transport Division (made up of 15 steamers carrying the initial reinforcements, supplies and equipment) was also at sea as planned and by noon on 8 April, the Bergen and Stavanger groups were making their way through the Skagerrak off the Norwegian coast. The Kristiansand group lay in the vicinity of Skagen, at the tip of the Danish peninsula; and the Oslo group was situated in the Kattegat off the Danish coast. The overall German situation on the water and the enemy's knowledge of this was neatly summed up in the naval war diary entry of 8 April:

The enemy is aware that the battleships are included in the Narvik and Trondheim Groups. Our own plans are not yet revealed, but is possible that increased steamer traffic through the entrances to the Baltic may appear a most striking measure both to neutral Scandinavian countries and the enemy in connection with the known concentrations of transports in Hamburg, Stettin, Gdynia which took place some time ago. It can not be ascertained how far the enemy has actually been warned or is acting on supposition.

In fact, the alarm bells within the Admiralty were all but silent. The only real threat posed to German transport forces in transit were the twenty or more submarines positioned
off the south-western and southern coast of Norway and in the shallows of the Skagerrak and Kattegat in order to intercept any counter-operations in response to Operation Wilfred. These submarines were ideally situated to attack German transports once they had been positively identified. Of the two transports lost on 8 April, it was the sinking of the Rio de Janeiro (of the 1st Transport Group bound for Bergen) off Kristiansand at 1200 hours that caused the Germans a good deal of hand wringing. Sunk by the Polish submarine Orzel, German troops in full uniform were rescued by a Norwegian destroyer and local fishing craft. The bedraggled Germans were very forthcoming and confidently informed their rescuers that they were on their way to Bergen “to protect it against the Allies.” By 2030 hours, the Reuters news agency broadcast that “The German transport ship Rio de Janeiro with 300 men on board had been sunk” off the Norwegian coast. This followed a 1800 hours press release which stated that 80-100 German naval vessels were proceeding through the Great Belt and Kattegat escorted by auxiliary vessels and trawlers. By late evening on 8 April, German naval staff prematurely concluded that operation “Weserübung has left the stage of secrecy and camouflage . . . our enemies have been warned.” Neither Oslo nor London, however, took the matter particularly seriously and the Allied submarines would not be given the order to sink north-bound traffic without positive identification until the afternoon of 9 April. By this time, the juiciest of targets had already passed tantalisingly before Allied periscopes and disgorged their deadly cargoes in Norwegian ports.

In London, the Admiralty attached no particular significance to the Rio de Janeiro incident, and by the evening of 8 April, its myopic gaze still lingered on the northern gateway to the North Sea and bringing the German warships in this area to battle. Likewise in Oslo, the news of the Rio de Janeiro was not taken seriously and consequently, the government did not order a general mobilisation or increase the preparedness of Norway’s defences. The failure to recognise the German threat was all the more damning given the large amount of intelligence being relayed to the Norwegians from diplomatic sources in Berlin and Copenhagen. Norwegian Prime Minister Nygaardsvold and Foreign Minister Koht failed to give these warnings any credence largely because their concern rested more in the west with Britain and France. Various declarations made by Churchill, Chamberlain and Reynaud pointed to the likelihood of some rash action being taken by the Allies rather than Germany. For example, the Supreme War Council’s 28 March declaration to Oslo gave notice that the British and French reserved the “right to take such measures as they may think necessary” to hinder or prevent Germany from obtaining Swedish or Norwegian
resources “for the purpose of war.” As a French historian, François Kersaudy, concluded in his study of the campaign in 1940, “the Norwegians were all but hypnotised by the likelihood of a British operation.”

Meanwhile on the eve of Weser-day, as German seaborne assault units prepared to enter Norwegian fjords within a matter of hours, the Luftwaffe made one last throw at Scapa with 24 aircraft of X Fliegerkorps. In fading light one battleship was hit amidships, a cruiser was hit astern, while two bombs struck between two cruisers anchored close together and one bomb fell in close proximity to another cruiser. Aside from the shooting down of a single-engined British fighter, no other successes were achieved. However, the report covering the flight revealed that in addition to the vessels mentioned above, Scapa Flow was currently home to an aircraft carrier, five or more heavy or light cruisers, and a number of destroyers and auxiliary ships. No doubt the moderate success of the Scapa sortie was received favourably by Geisler at X Fliegerkorps’ headquarters in Hamburg’s plush Hotel Esplanade. Thus far, German air power had done all that was required of it. Coupled with a measure of good fortune, bad weather and the British Admiralty’s failure to grasp the full implications of the German naval activity over this period, X Fliegerkorps was able to provide adequate air cover for the Trondheim and Narvik Groups and gather valuable information on the strength and disposition of British forces. Yet this was merely the precursor to the campaign and the real test of the Luftwaffe’s mettle lay but a few hours away.
Chapter 3
Norwegian Blitzkrieg

"The campaigns in Poland, Holland, Belgium and France, and last, but not least, in Norway had proved unequivocally how important air supremacy is in modern war." General der Flieger Karl Koller, 1945

At 0615 on 9 April, above the drone of radial engines and the noisy rush of air over the Ju 52s' boxy corrugated fuselage, German paratroopers jumped into the pages of history and the rural landscape of peaceful Denmark. This paratroop assault, the first in the history of warfare, had been hastily arranged only at the last minute. Initial plans drawn up for the deployment of these men had seen them being incorporated among the troops currently on their way to the Aalborg East and West airfields in northern Jutland, Oslo's Fornebu airfield, and Stavanger's Sola field on Norway's south-western coast. Yet, only 36 hours before Weser-hour, frantic planners decided to siphon off 90 of the men assigned to Aalborg and deploy them in nine Ju 52s south of Copenhagen, where under the leadership of Hauptman Walter Gericke, they would capture the three kilometre long bridge linking the Gedser ferry terminal in the south to the Danish capital and "hold it until infantry arrived from Gedser." The flight had been uneventful and the lush Danish countryside and its inhabitants still slumbered as German paratroopers drifted silently groundwards. Not a single shout of warning or shot rang out from the fort below and within minutes of landing, the garrison on the small island of Masnedø was captured. All that was left to do was secure the bridge and this was achieved just after 0700 with the aid of an advance portion of the Army forces pushing through Denmark from Germany. Thus the first paratroop action in the history of warfare had been completed bloodlessly. The invasion of Denmark and Norway had begun.

Meanwhile, at 0535, three more Ju 52 transports laden with paratroops were winging their way from Ütersen towards the Aalborg airfields, which when captured would act as a springboard for aerial operations over Norway. At 0700, the men were dropped over the Aalborg East and West airfields. Surprise was again complete, and within only 20 minutes infantry forces were being brought in by 53 Ju 52s. The escorting twin-engined fighters also landed at Aalborg. Before nightfall, the air defences of the Aalborg bases were in the hands of a Luftwaffe flak unit and a massive airlift by 139 Ju 52s began the process of ferrying in ground crews, ammunition and fuel for the Bf 110s, who were to secure the air transport routes running between Aalborg, Stavanger and Oslo. All in all,
1. The Occupation of Denmark, 9 April 1940

transports delivered an impressive amount of personnel, equipment and supplies on 9 April, including paratroopers, airborne units, radio communications, the forward command staff of the special *Weserübung Sud Luftgau* (for the establishment of the ground organisation), service crews, munitions for the fighters and 170,000 litres of aviation fuel.\(^8\) In addition to the seizure of Aalborg East and West, the Esbjerg airfield, on Denmark’s western seaboard, was occupied and Bf 109s stationed there. Defence for this field was the responsibility of a flak unit which arrived overland from Germany.\(^9\) On 9 April, the only combat experienced by the fighters deployed over Denmark took place at Vaerlöse airfield where Bf 110’s escorting bombers of KG 4 shot down a Fokker C-VE as it took to the air. The twin-engined German fighters then swooped on the remaining aircraft on the ground, destroying a substantial number of Danish fighters and reconnaissance aircraft.\(^10\) Other than this one-sided engagement, Bf 110s and Me 109s lay in wait at Aalborg and Esbjerg airfields, ready to provide defensive cover for the fields against possible British air attacks.\(^11\)

The Army’s advance and the Navy’s landings were equally trouble-free. At 0515 two motorised brigades and a infantry division swept across the common frontier, shrugging off minor pockets of resistance in North Schleswig.\(^12\) By 0800 all opposition had ceased, and before dusk a motorised rifle brigade had connected with Aalborg and the northernmost tip of Jutland, where soldiers of the *Wehrmacht* were able to gaze upon the confluence of the Skagerrak and Kattegat. German motorised units had covered the entire 330 kilometre length of Denmark in a day. The naval landings at Krosör, Nyborg, Middlefart, Esbjerg and Tyborøn also went according to plan (aside from the beaching of the First World War battleship *Schleswig-Holstein* in the Great Belt) and beachheads were established without opposition.

In Copenhagen, the Germans were able to take the Danish capital by complete surprise. Although searchlights were brought to bear on the German motorship *Hansestadt Danzig* flanked by an icebreaker and two picket boats as she entered the port, the guns guarding the harbour’s entrance remained silent, unable to fire because of grease in their barrels.\(^13\) The landing was designed to take place simultaneously with aerial demonstrations. On schedule at 0703, aircraft of KG 4 *General Wever*, escorted by twin-engine fighters, buzzed the Danish capital at only 100 metres, raining leaflets on the city’s astonished inhabitants. The Heinkels encountered only a minimal amount of ground fire from the south-western part of the city, to which they replied in kind with their defensive armament. “Other than this”, noted the unit history of the *General Wever* bomber wing, “no resistance was given.”\(^14\) After being threatened with the bombing of Copenhagen, the
Danish government capitulated at 0720.\textsuperscript{15} \textit{Weserübung Süd} was a complete success, and the Luftwaffe had played its part to perfection by bringing about the swift capture of the strategically-important bridge south of Copenhagen, securing the Aalborg airfields for the use of German aircraft and further weakening the Danes' flagging will to resist through aerial demonstrations. The Germans now held their stepping-stone and staging post for air operations over Norway and its coastline. In Norway, however, a completely different campaign was developing in the face of stiffening resistance and deteriorating weather.

\textbf{Drama at Fornebu and Oslo}

On 9 April, 29 transports under the command of First-Lieutenant Drewes, made their way to Oslo's Fornebu airfield filled with paratroopers. The weather, though, did not bode well for the success of the mission. The German meteorological service was pessimistic about the day's prospects and as Drewes' aircraft approached the Skagerrak it appeared even worse than they had anticipated: fog lay in a dense blanket stretching from sea level to nearly 600 metres, and above this the sky was punctuated with further cloud layers. As the aircraft moved over Oslo Fiord, they became immersed in thick fog, which reduced their visibility to little over 20 metres. While fretting as how to carry out the drop successfully over Fornebu in such atrocious conditions, Drewes was informed that two aircraft were missing. This tipped the scales for the \textit{Oberleutnant} and he radioed Hamburg at 0820: "Turning back due to bad weather. Proceeding to Aalborg."\textsuperscript{16}

At the Hotel Esplanade the message was greeted with a great deal of anxiety because events taking place on the water in Oslo Fiord were progressing disastrously. Norwegian resistance was proving a surprising barrier to the might of the German Navy then attempting to breach the narrows of the fiord leading to the capital. Led by one of Germany's newest men-of-war, the heavy cruiser \textit{Blücher}, Group 5 had left Kiel at 0300 on 8 April and passed into Oslo Fiord around midnight. Their task: secure Oslo, the strategic and political centre of the country. Strategically, Oslo was not only Norway's commercial and industrial heart, but the communications hub for all of southern and central regions. Its planned rapid capture by four battalions (two bought in by air via Fornebu and two over water by Group 5) would facilitate the rapid reinforcement and supply by road and rail from Oslo of the relatively weak forces establishing themselves in the other ports. Politically, as the centre of government, the Germans intended to carry out a \textit{coup de main}, seizing the King and ministers of government and extracting a capitulation. Hence a failure
2. The Landings in Norway, 9 April 1940

to capture Oslo quickly could imperil the whole campaign; an outcome which seemed all too possible as German naval vessels were brought to a grinding halt in the narrows of Oslo Fjord.\footnote{17}

Initially, Group 5 had passed the outer entrance to the fiord without any major problems. At about the halfway point, a couple of torpedo-boats and eight minesweepers broke off to capture the naval air base at Horten and two small forts on the islands of Rauøy and Bolcerne. So far so good, the dark moonless night had for the most part cloaked their approach. However, the small German armada still had to pass through the Drøbak narrows, at which the main defences of the fiord lay. Situated about two-thirds of the way into the fiord, and only 400 metres wide, this narrow channel passes Kaholm Island to the west and the mainland to the east. On the former resided the Oscarsborg fort, armed with three old 28-cm guns manufactured by Krupp in 1905 and an antiquated torpedo battery of Austrian manufacture; while the latter boasted a battery of three 15-cm guns and two Bofors, plus a handful of smaller calibre guns.

In reduced visibility, caused by a heavy haze, Blücher reached these defences at about 0500, and at an almost reckless speed of 25 knots proceeded to steam into the Drøbak narrows at the head of Group 5. The Norwegians held their fire until the Germans were at point-blank range, then opened up upon the leading vessels. Lützow was struck three times and heavy shells knocked out the Blücher’s bridge while light gunfire ignited the aviation fuel and munitions stacked on its deck, eerily lighting up both sides of the snow-draped fiord. Torpedoes then racked Blücher’s hull and at 0730 the magazine exploded. One of Germany’s most modern warships then rolled over and sank in deep water with the loss of about a thousand men. The assault on Oslo was in grave peril. Lützow and Emden had to withdraw and it was decided to land men at Sonsbukten on the eastern coast of the fiord for an assault on the Narrows by land. Additionally, forces were required to subdue continuing resistance at Horten and at the forts in the outer reaches of the fiord. In short, the naval assault on Oslo would not arrive on time; and in fact, Group 5 was not able to pass through the Drøbak narrows and reach the capital until late in the morning of the following day. Given this disastrous situation on the water, the dramatic events that were to take place in the air at Fornebu on 9 April were to assume a much greater importance than originally anticipated.

Meanwhile, the success of the defences in Oslo Fjord had not gone unnoticed in the Norwegian capital. At 0520, Kurt Bräuer, the German Minister to Norway, delivered to Halvdan Koht, the Norwegian Foreign Minister, his country’s “friendly” ultimatum which
stated in the first instance that “German troops did not set foot on Norwegian soil as enemies”, while in the next breath threatening the Norwegian government that “any resistance would . . . be broken up by all possible means . . . and would therefore lead only to absolutely useless bloodshed.” The Norwegian reply was swift and to the point: “We will not submit voluntarily; the struggle is already under way.”18 The Oslo Fiord disaster had strengthened the Norwegian hand: the defences in the Drøbak narrows still held; Blücher had been sunk; and the small detachments set ashore below the narrows to clean up and advance on Oslo by foot were still some 80 kilometres from the capital.19 In short, the Germans’ only hope of taking out the key strategic and political centre in Norway quickly now lay with the Luftwaffe.

Drewes’ decision to turn back with the paratroopers meant hard decisions now had to be made at the Hotel Esplanade over the fate of the second wave of Ju 52s bearing the airborne troops; these aircraft were a mere 20 minutes from Fornebu and if allowed to continue would land at an uncaptured airfield perhaps under heavy fire. Aware of the failure of the paratroop drop, Generalleutnant Geisler ordered these aircraft also to return, since Göring had made it clear to the commander of X Fliegerkorps that should the air drop not take place, all succeeding echelons were to be recalled.20 The Transport Chief Land resisted. “They can force a landing even though the airfield has not been secured” exclaimed Gablenz, who promptly refused to recall his units. Geisler however, was adamant that he would not have the aircraft and the men they carried “shot to pieces” and in his authority as commander of X Fliegerkorps, orders were given by radio for the transports’ recall.21 Amazingly, the officer in charge of the second formation heading for Fornebu, Hauptmann Richard Wegner, chose to disregard this directive. His decision seems, at least partly, to have been based on suspicions aroused by the fact that the order was given under the authority of X Fliegerkorps, and not, as he would have expected, from the Transport Chief Land. In any case, his resolve appeared justified when the fog near Oslo dissipated and the airfield came into view in the distance. The arrival of the transports over Fornebu coincided with the appearance of Bf 110s under the command of Oberleutnant Werner Hansen.

These twin-engined fighters were in an even more desperate situation than the Ju 52s, because they were at the limit of their operational range and therefore returning to Germany was not even an option. Their fuel shortage had been compounded by a couple of skirmishes with up to ten Norwegian Gloster Gladiators just prior to the arrival of the Ju 52s. Although poorly armed, these agile single-engined biplanes proved to be quite a
handful and shot down two of the heavy and cumbersome Bf 110s. Eventually the remnants of the defenders were compelled to break off the attack, two of which made forced landings below at the Fornebu airfield and were immediately strafed and set aflame by Hansen’s aircraft. They followed this up with further strafing attacks on ground defences and then resumed their holding positions above the field praying for the expected arrival of the Ju 52s. Unaware that the first wave of transports were already on their way home, Hansen was amazed when the second wave arrived shortly thereafter at 0905 and began to form into a landing pattern, approaching the runway rather than, as he expected, disgorging paratroopers from above.\textsuperscript{22}

On board the leading Ju 52, Wegner had seen the two Gladiators ablaze as his transport banked sharply to line up the runway and signalled the pilot to take the aircraft in. As it drew near to touching down, ground fire raked the fuselage of the aircraft killing Wegner and wounding a number of his men. Whereupon the pilot opened up the throttle and the Ju 52 lumbered skyward. Hansen watched wide-eyed from aloft, and based on the fact that the fuel of his six remaining aircraft was perilously low (three were already running on only one engine), and realising that the transports were in fact intent on landing at the heavily-defended airfield, decided to bring in his Bf 110s and attempt to secure the field. With one aircraft to cover the landings, the remaining fighters landed at 0915. One of these overshot and crashed while the others taxied to the corners of the airfield where their rear-firing machine-guns could provide some cover for the incoming transports.\textsuperscript{23} At the same time, a number of the transports crash-landed due to damage inflicted by ground fire. By this stage though, the anti-aircraft defences had grown strangely quite and when Hansen’s crews and airborne infantry “stormed” the defensive positions they found them empty—the Norwegian forces had withdrawn under orders. Fornebu was in German hands.

The small stream of remaining transports began to land, including stragglers which had become separated from the main formation while navigating through the dense fog. Once \textit{X Fliegerkorps} was informed of the success, the main body of 159 transports began ferrying in significant numbers of troops and Luftwaffe ground staff, aviation supplies and equipment essential for continued operations.\textsuperscript{24} Before nightfall, the infantry units plus paratroopers brought in by air had delivered Oslo into German hands. Two days later the commander of \textit{X Fliegerkorps}, upon his arrival, shook Hansen’s hand cheerfully confessing that: “But for your squadron things might have turned out very differently.”\textsuperscript{25}

The Luftwaffe’s swift action could not, however, prevent the Norwegian King and his government being spirited out of Oslo. The failure to breach Oslo Fjord’s defences
meant that the advance on the capital would have to be made from Fornebu and it was not until 0330 of 9 April that the Germans were able to march on the city with a military brass band and six companies from the airfield. By this time though, King Haakon and the Parliament had long gone and subsequent attempts by the Germans to capture them were similarly fruitless, as their prey always remained one step ahead of them. Thus German hopes to bring about a coup de main on 9 April came to nothing and Norwegian resistance continued.

This was nowhere more evident than in Oslo Fiord where the Luftwaffe was called upon to clear out the determined Norwegian defenders. The first aerial assault was carried out against the Horten naval base and the Bolcerne fort shortly after the first air units touched down at Fornebu. These were made by 28 Heinkels of KG 26 which had been demonstrating over Oslo, but were then directed to immediately attack these pockets of resistance. This was followed by a raid on Holmenkollen and Oslo’s other airfield, Kjeller, by 24 aircraft of KG 100, but they were only able destroy a couple of aircraft on the ground as most had already fled north. Later in the morning, 22 Stukas attacked the Oscarsborg fortress. The Norwegians refused to give in and further air support was requested; He 111s of KG 26 and KG 4 flew a total of some 1,740 sorties in repeatedly bombarding the defences of Kaholmen, Oscarsborg and Drøbak. Finally at 1705, 13 hours since the ill-fated Blücher attempted to breach the narrows, Lützow was informed that “X Fliegerkorps is now attacking Drøbak: they consider the time favourable for a breakthrough.” Drøbak fell at 1900, but protracted negotiations over the surrender of Kaholmen meant (as already noted) that the German vessels would not pass through the narrows and tie up at Oslo until 1145 the next day. However, thanks to the Luftwaffe, the capital was already in German hands, staving off a crucial delay in securing the key strategic gateway to southern and central Norway.

Kristiansand, Stavanger and Bergen

Luftwaffe units also proved decisive at Kristiansand. This landing formed the main objective of the Navy’s Group 4 led by the cruiser Karlsruhe, while a minor operation involving the capture of Arendal was carried out successfully around 0900 by a torpedo-boat and its small number of troops after being delayed by fog. Karlsruhe and her entourage of torpedo-boats were also delayed by the thick fog clinging to Kristiansand’s coastline and although they had arrived at the fiord’s entrance at 0345, it was not until 0600 that the fog
3. The Bergen-Stavanger-Kristiansand Zone Operations, 9 April 1940

had lifted sufficiently to permit them to navigate the fiord. By this time though, they could no longer rely on darkness to cloak their movements and in a short space of time the vessels were spotted by a Norwegian floatplane. The game was up. Originally, the Germans had planned to disembark a reinforced battalion from *Karlsruhe* aboard fast patrol boats and drop it ashore where it could advance unseen to capture the two island forts guarding the mouth of the fiord. In light of the prevailing situation, *Kapitän zur See* Rieve, *Karlsruhe*’s commander, was forced to abandon this plan and called in the Luftwaffe to bomb the forts while a much smaller detachment of troops on board two of his torpedo-boats were to land directly below the batteries.

The first aerial foray against the fortified positions was delivered by seven Heinkels of KG 4, which were in the vicinity of the fiord carrying out a patrol of the area. This initial assault augmented by attacks by an Arado floatplane launched from *Karlsruhe*, proved inadequate for the task of subduing the batteries. A subsequent low level raid by 16 Heinkels of KG 26 at 0930, however, silenced the batteries on both forts and blew up one of their ammunition dumps. Aside from one plane being struck by anti-aircraft fire and ditching in the sea, the raids were completely successful and a landing party was able to storm one fortification and by 0300 the city had been captured. As at Oslo, it was the Luftwaffe that had tipped the scales in the Germans’ favour.

The inclement weather experienced at other points along the southern Norwegian coast also affected the landings at Stavanger’s Sola airfield. Due to the fog and heavy cloud, of the eight Bf 110s dispatched to support the paratroop drop, four were forced to return to Germany and two collided, crashing into the sea. The two remaining twin-engine fighters would provide the sole support for the 24 transports laden with over 150 paratroopers. These lumbering aircraft were also finding the conditions difficult. As the squadron commander, Hauptmann Günther Capito commented afterwards, “the cloud bank swallowed up the whole squadron” and despite “the closest formation, the nearest aircraft was like a shadow.” However, 100 kilometres off the Norwegian coast the clouds parted and the Ju 52s drew into formation again, dropping from 900 metres to just above the foaming wave crests. When they reached Stavanger’s latitude at 0920, they turned inland, hugging the hillsides at a height of just ten metres in order to avoid forewarning Sola’s ground defences. They arrived only minutes after the Bf 110s, and after glimpsing the fighter’s handiwork—two Norwegian aircraft caught on the ground and now ablaze—they climbed to only 120 metres, dropping the paratroopers right over the target. The hail of bullets that rose to meet them were soon subdued by strafing runs made by the fighters and
then extinguished by the landed paratroopers. One Norwegian bomber, which along with a handful of other aircraft had managed to flee the German onslaught at Sola, returned to attack but was soon forced off by one of the eight Heinkels of KG 4 which had arrived as part of the supporting exercise. Sola, one of Norway’s best airfields, was in German hands. In the following hours a large airlift was carried out by over 100 aircraft, bringing in troop reinforcements, part of the special Luftgau 200 for Norway, flak personnel and equipment, ground crew and aviation fuel. The airlift was augmented by the men and materials brought in by the 1st Naval Transport Group. By nightfall, the air base was an operational home for 22 Stukas, four Bf 110s, and ten He 115s stationed in the harbour. South of Stavanger, a much smaller assault was accomplished with even greater ease when 150 men delivered by four minesweepers of Group 6 took the small coastal town of Egersund.

Group 3, destined for Bergen and led by the light cruisers Köln and Königsberg, reached the entrance to Kors Fiord at 0430. By this time, Vizeadmiral Hubert Schmundt had successfully negotiated the most dangerous leg of the voyage. As Bergen lay closest to the British coast—only eight to nine hours sailing time from Scapa Flow—Schmundt’s force was not only the most likely group to run into British naval units en route, but Bergen was the most likely target for an Allied counter-operation once the British and French realised what the Germans were up to. (Unbeknown to Schmundt, his force had come close to being discovered at 1700 on 8 April, only 110 kilometres from a much larger Royal Navy force; luckily the latter had been steering northward away from his units and he had not been sighted.) At the entrance to North By Fiord troops were disembarked for their assault on the Kvarven batteries guarding the fiord. Schmundt, however, was keen to arrive on time at Bergen and decided not to wait for the capture of the batteries, and pressing ahead with the force into the fiord. As Group 3 passed first the Kvarven and then the Sandviken batteries (situated within North By Fiord) at around 0515, the German warships came under fire. The service ships Bremes and Karl Peters were hit, while Königsberg suffered heavy damage, being struck three times. Nevertheless, by 0620 German troops had disembarked and taken over the town. Meanwhile the batteries at Kvarven and Sandviken still held out, and it was not until the Luftwaffe was called in to dislodge the defenders that the Germans made any progress against the batteries. The bombers of KG 4 arrived over Bergen soon after 0700 and immediately began an aerial assault on the positions; within a short space of time, German troops were able to seize the fortifications. X Fliegerkorps transports then proceeded to ferry in the troops of the 159th Infantry Regiment with pontoon-equipped Ju 52s.
Trondheim and Narvik

Further up the coast, four destroyers led by the cruiser Hipper, under the command of Kapitän zur See Hellmuth Heye cruised into the Frohavet, Trondheimfjord's outlying waters at 0300 in the morning of 9 April. Despite a minor brush with a Norwegian patrol boat and the outlying batteries at Brettingnes, Haysnes and Agdenes, the German vessels steamed up the fiord at 25 knots, soon passing beyond the arc of the sentinel's guns. Three of the destroyers were then detached to land troops to capture the fortifications, while Hipper and the fourth destroyer made directly for Trondheim, anchoring there at 0525. Two companies of the 138th Mountain Division went ashore and secured the city without incident. The Germans, however, were unable to subdue resistance within the fortifications before nightfall and Trondheim's airfield, Vaernes—32 kilometres east of the city—remained in Norwegian hands.

Since Vaernes was unavailable to the Luftwaffe, it became important to carry out the planned deployment of coastal reconnaissance floatplanes of KüFlGr 506 in the harbour waters. Therefore, once Hamburg had heard via radio of the capture of the town, a Condor reconnoitered the harbour to ascertain the overall situation in the region and determine whether it was possible to send in a servicing unit for the anticipated arrival of these floatplanes. The news was favourable, and later in the day personnel and equipment were flown in by five Condors and a single four-engined Junkers G 38.34 Gablenz's floatplane transports also dropped off mountain troops along the Norwegian coast in small groups. During the remainder of the day, a total of 14 coastal reconnaissance floatplanes landed in Trondheim's inner waters. The landings were less than smooth, and nearly every aircraft suffered some form of damage. Even worse, the so-called “Export Group” supply ships for Trondheim had not appeared. Not only did this make life difficult for Heye, since although Hipper had enough fuel for the homeward journey the destroyers would have to be refuelled first, but the newly arrived floatplanes were effectively grounded through a dearth of aviation fuel. Moreover, what fuel they did have Heye preferred to hold back in readiness for the intended return run by the warships, when aerial reconnaissance by KüFlGr 506 would be essential.35 Consequently, only one reconnaissance flight was made along the outer coast, and that by Hipper's own floatplane.36

The failure of the “Export Group” supply-ships to turn up at Trondheim was repeated at the most northern point of German operations on 9 April. Nine of the
4. The Occupation of Narvik, 9 April 1940

destroyers bound for Narvik (one of the ten had fallen three hours behind in heavy seas) passed into the calmer waters of Ofot Fiord at 0400. Here, at the fiord entrance, one destroyer was left to take up patrolling duties, while at 0440 two destroyers were detached to land troops at the forts of Ramnes and Havnes. As the remaining destroyers moved to the head of the fiord, three broke away to land men 13 kilometres north of Narvik at the army depot of Elvegaardsmoen in Herjangs Fiord, while the last three headed directly to Norway’s most important northern port. This latter triumvirate, under cover of snow flurries, encountered two Norwegian coastal defence ships, the Norge and the Eidsvold. Though old and considerably outgunned, the Norwegian vessels chose to resist the German destroyers but were quickly dispatched by torpedoes fired from Wilhelm Heidekamp and Bernd von Arnim, suffering heavy casualties. From the leading destroyer, General Dietl, commander of the mountain forces, was landed and eventually entered into negotiations with the local commander, Colonel Sundlo. In the meantime, while a temporary truce was in force, the Germans moved into the town setting their own positions to counter the Norwegian defensive placements. Thus, by the time the elderly Sundlo had been advised to repel the Germans it was too late; he had been out-manoeuvred and at 0615 when Dietl pointed out the Germans’ superior strength and position, the Norwegian commander was compelled to hand over Narvik to avoid unnecessary bloodshed. Once secured, Dietl wirelessed Falkenhorst at 0800 with the news that Narvik and Elvegaardsmoen were now in German hands.

Dietl’s greatest challenge, though, would be to hold Narvik. Originally, the Germans had envisaged utilising the Norwegian batteries at the fiord entrance to ward off unwelcome British advances. However, after floundering around in snow drifts up to six feet deep, the German troops which had been landed earlier to secure these facilities found them to be non-existent. Moreover, as noted, none of the “Export Group” designated for Narvik arrived and the limited amount of equipment stowed on the destroyers for the 139th Regiment had been badly knocked around in the heavy seas off the Norwegian coast the day before. With regard to the destroyers, their situation appeared particularly bleak since only the Jan Wellem of the three tankers intended for Narvik had arrived and could refuel no more than two destroyers at any one time. All in all, the vulnerable warships and the relatively weak and poorly-equipped ground forces were ill-prepared to meet the challenge the Allies would focus on Narvik in the days ahead.
Weserübung over the Sea

The Luftwaffe’s success on land on 9 April was repeated at sea. Aside from carrying out the aerial assaults at Aalborg, Fornebu, Kristiansand and Stavanger, one of the main functions of X Fliegerkorps was the interception of British naval forces. Thus the Luftwaffe was charged with covering the westward flank against both attacks on German vessels on their way to home ports after the invasion, and Allied attempts at counter-landings on Norwegian soil. Therefore, throughout the day, 49 sorties were flown by the coastal reconnaissance units of the Naval Air Command West.38 Although these flights were not particularly successful, several sightings were made by reconnaissance aircraft of X Fliegerkorps and these led German analysts to believe that the British had three flotillas at sea. In reality there were only two: the Home Fleet, consisting of four battleships, three heavy cruisers, seven light cruisers and 14 destroyers, under command of Admiral Charles Forbes and lying 150 kilometres off Bergen; and the second flotilla—a detachment of the Home Fleet—made up of four light cruisers and seven destroyers. This latter force was under the command of Admiral Layton, and by mid-morning was north-west of Forbes’ position. Fortunately for the Germans, Forbes’ intended assault on their ships within Bergen was countermanded by the Admiralty; had it been carried out, the British would have caught Köln steaming alone up the fiord on her way home and the damaged Königsberg and Bremse vulnerable at their moorings in Bergen. However, instead of surprising the vulnerable German vessels, Forbes and the Admiralty were about to learn that deploying naval units within range of land-based bombers without giving due consideration to adequate anti-aircraft defence or fighter cover was a serious oversight. The only carrier in the region was Furious. Yet, incredibly, in the Admiralty’s rush to do something—anything—to met the German challenge, she had been despatched to rendezvous with the Home Fleet without her fighter squadron and thus proved utterly useless in the immediate operations.

A veritable sitting duck without fighter cover and operationally useless without her versatile but sluggish Swordfish torpedo-reconnaissance aircraft, it was fortunate for the British that Furious did not reach Forbes’ flotilla in time, since German air crew had been instructed to concentrate on Allied carriers whenever they were sighted.39 Göring, the principle advocate of sinking aircraft carriers, offered the coveted Knights Cross and RM.100,000 to any who succeeded.40 On the other hand, the British failure to have an aircraft carrier in a high state of operational readiness in the region is all the more remarkable since they had anticipated—even hoped for—German activity in the North Sea
in response to the mining of the Leads, Operation *Wilfred*. Indeed, so ill-prepared were the British, that on 7 April, just one day before the Royal Navy sowed Norwegian territorial waters with mines, *Furious* was docked at least 24 hours away at Clyde, on Scotland’s west coast.

Meanwhile, the distance German aircraft had to fly to reach potential targets in the North Sea had shortened considerably in the last few hours. For example, at midday on 9 April, although the Home Fleet was still some 650 kilometers away from the Luftwaffe’s German bases, the recently acquired Danish and Norwegian airfields considerably reduced the distance between the birds of prey and their water-borne targets: the Aalborg and Sola airfields were now only 520 kilometres and 160 kilometres distant respectively from Forbes’ force. Although both these fields were only in the throes of preparation and, therefore, unable to directly support the aerial assault about to be made on the Home Fleet, the Sola airfield proved indirectly useful. Nearly two dozen short-range Stukas sent from Kiel-Holtenau to participate in the attack about to take place on the Home Fleet, ran short of fuel before finding the flotilla and were able to land at this field after finding an isolated Norwegian destroyer and sinking her.

The main event however, was taking place further out to sea and would last for nearly three hours as German bombers attacked the British warships. The initial wave comprising portions of KG 30 reached the Home Fleet at 1530, and soon after were joined by KG 30’s remaining Ju 88s and KG 26’s Heinkels—nearly 90 aircraft in total. By early evening it was all over and *X Fliegerkorps* claimed a large bag. KG 26 reported that it had made three hits each on a couple of British battleships, and further hits were reported on a battle-cruiser (the *Repulse* or *Renown*), a heavy cruiser and two troop ships. KG 30 was no less confident of its successes, claiming hits on two battleships, a heavy cruiser and a cruiser. In the tradition of all combat aircrews, the Luftwaffe men had greatly overestimated their successes. In reality, despite the German Naval Staff confidently asserting that these “definite hits can be assumed”, only the destroyer *Gurkha* was sunk, while the battleship *Rodney* was hit by a 500-kilogram bomb which failed to explode, and the cruisers *Devonshire*, *Glasgow*, and *Southampton* suffered only relatively minor damage from near misses.\(^{41}\) The mention of troopships was a case of mistaken identity and reflected the Germans’ general fears of a swift counter-invasion by the enemy. As for the British, although they had downed four Ju 88s, some of Forbes’ warships had shot off up to 40 per cent of their anti-aircraft ammunition. The Home Fleet commander, therefore, determined that to remain in the vicinity of German bombers any longer without adequate fighter
cover—despite the inconclusive material results of the encounter—was nothing short of suicidal. So, as evening fell on 9 April, Forbes moved his vessels away from the coast.\(^4^2\) Thus, in one stroke, he made it impossible for the Home Fleet to directly hinder the German warships dash for home waters in the coming hours, and the Luftwaffe was able to claim to have fended off not only a threat to the German Navy’s returning warships but also—erroneously—an attempted British landing.\(^4^3\)

Nevertheless, once Forbes realised that he had to remove his fleet from within the range of German bombers, he also redirected the vulnerable *Furious* further north for action in the Trondheim region. At 2230, Forbes also proposed that the southern region of the North Sea be relinquished by the Royal Navy to submarines as, owing to the superiority of German air power, an attempt by surface vessels to restrict enemy sea traffic there would be untenable.\(^4^4\) The result was an order issued the following evening: “Interference with communications in southern areas must be left mainly to submarines, air and mining, aided by intermittent sweeps when forces allow.”\(^4^5\) The directive was a tacit admission by the British that German air power was already gaining ascendancy over the Royal Navy in the waters off Norway.

The directive also recognised the notable successes achieved thus far by Royal Navy submarines in the region. Although *Hipper* and *Köln* successfully ran the submarine gauntlet under cover of darkness, other vessels were not so fortunate. During the evening of 9 April, the British submarine *Trident* spotted the cruiser *Karlsruhe* steaming out of Kristiansand headed for Germany and at 0700 the following morning struck swiftly; after three agonising hours of trying to keep afloat, *Karlsruhe* was scuttled. Moreover, when the British Cabinet approved attacking shipping on-sight, nearly a dozen vessels were sunk in the following week.\(^4^6\) Thanks to Allied submarines and the threatening presence of Royal Navy surface vessels, not a single vessel of the “Export Groups” had made it to Narvik or Trondheim. In a German Navy summary of the successes of the transport steamers for *Weserübung* on 11 April, of the nine steamers and tankers destined for these northern ports seven had been sunk, one had put into Bergen and one was still *en route*.\(^4^7\) Although 22 vessels of the 1st and 2nd Transport Groups did arrive at their central and southern Norwegian destinations, a further five had been lost. Enemy submarines also played a vital part in the heavy damage suffered by *Lützow*. Making her way to Germany from Oslo on what was supposed to be one of the shortest and safest routes, *Lützow* was unexpectedly hit astern by a torpedo from the submarine *Spearfish*. With a mangled rudder and smashed propellers, the pocket battleship was barely able to prevent beaching on the Danish coast.
and limped into Kiel three days later so badly mauled that a year would pass before she was seaworthy. More importantly, the Allied submarines wrought havoc with vital German supply and reinforcement plans. British submarine successes, however, could not continue. The ever shorter summer nights, and the diminishing influence of Royal Navy surface vessels, coupled with a corresponding increasing German presence, made operations increasingly hazardous over time. This was due in no small measure to the decision on 10 April to place \textit{X Fliegerkorps} in sole charge of anti-submarine operations for a limited period. Consequently, bombers were deployed in escorting naval transports between Germany and Norway and on active anti-shipping sorties.\footnote{48} In addition to this, the OKW made the transports a much more difficult target to hit by employing lighter and faster vessels to dash between northern Denmark and southern Norway rather than the larger more ponderous merchant ships. By 16 April these “fast convoys” were under way, and aided by the increased air activity, proved very successful.\footnote{49} In the following weeks, Allied submarine activity gradually fell away with the loss of four Allied submarines. Yet, in the short-term, the damage had been done and the German supply ships loaded with reinforcements and supplies destined for Bergen, Trondheim and Narvik were decimated.

On the whole though, 9 April belonged to the \textit{Wehrmacht}. All military objectives had been achieved and as the naval staff realistically concluded, “losses which have been incurred, especially that of the newest heavy cruiser \textit{Blücher}, are grievous, they are however, in proportion to the risk run and anticipated, and can not be called excessively high.”\footnote{50} Regarding the cost to the Luftwaffe, of its combat aircraft three Heinkels, four Ju 88s, and two Bf 110s were lost, while of the transports eight aircraft were either shot down or crashed.\footnote{51} The achievements of the Luftwaffe, however, were decisive to the success of the German invasion on 9 April. Through reconnaissance, bomber and transport operations, the units of \textit{X Fliegerkorps} tipped the scales in the early hours of \textit{Weserübung} when a rapid German victory looked far from assured. The Luftwaffe’s part in the proceedings was, nevertheless, merely beginning, because the Norwegian centres of Oslo, Kristiansand, Stavanger, Bergen, Trondheim and Narvik were still held only by weak German forces and the loss of sea transports would place even greater pressure on \textit{X Fliegerkorps} to reinforce and supply the central and northern regions in the days ahead. Moreover, in the wake of the invasion and the failure to achieve a \textit{coup de main}, the Norwegian government, King and army had withdrawn from the capital and were preparing to continue the fight in the heart of Norway.
Norwegian Resistance

In Berlin on 9 April, Hitler was jubilant; beaming, he exclaimed to Rosenberg "Now Quisling can set up his government in Oslo." Aside from the failure to capture the Norwegian government and King—which may well have brought about a quick and relatively bloodless capitulation similar to that which had brought an end to Danish resistance—the German insistence that the Norwegians accept a new government under the unpopular Quisling was a political mistake that had important military consequences and would allow the conflict to drag on into May and June. Once in Oslo, the German leadership's main task was to broker a peaceful settlement with the current Norwegian administration, which in the first instance resided in Hamar, and then Elverum only 80 kilometres from the Swedish border. Muddying the political waters further, Quisling opportunistically stepped into the momentary political vacuum in Oslo, and assembled his own cabinet. Up until this point, Dr Curt Bräuer, the German foreign minister to Norway, was certain that there existed a strong desire amongst the legitimate Norwegian government to reach a settlement with the invaders. However, once Quisling was introduced into the equation and, at the prompting of Hitler, essentially became the touchstone of German demands, Norwegian resistance crystallized and in the afternoon of 9 April the King refused to acquiesce to Quisling forming a government. When Bräuer finally realised five days later that he had to drop Quisling, it was too late. The Norwegian government would not now enter into negotiations at all, since it believed a successful Allied counter-attack was imminent. As for Quisling, his political ambitions remained stillborn as the political pariah's puppet government failed to get off the ground. Hitler replaced him on 19 April with Joseph Terboven, a faithful National Socialist official, as Reichskommissar for the Occupied Norwegian Territories. Nevertheless, the damage had already been done.

The resulting resistance in central Norway was of crucial importance to the German positions in northern Norway, since Norwegian soldiers still held the rail and road communications linking Oslo with Trondheim, which in turn was the gateway to Narvik. This prevented reinforcement overland of Trondheim in the immediate future. Additionally, because German air power could not be deployed in any significant strength in the latter region, the Royal Navy held a firm grasp on sea lanes in waters off northern Norway. With land routes blocked by the Norwegians and the sea lanes controlled by the British, the Luftwaffe remained the sole protector and supplier to German forces in the Far North around Narvik. However, X Fliegerkorps was not yet fully prepared to meet this challenge. As already noted, the floatplanes based at Trondheim were hamstrung by a lack of aviation
fuel and could not perform reconnaissance over Narvik and North Sea waters. Moreover
the ten or so He 115s of KūFlGr 106 assigned to Stavanger’s Sola field were over 500
kilometres from Trondheim and more than 1,000 kilometres from Narvik. Furthermore, the
short-range Ju 87s at Sola were clearly incapable of covering this huge gap in air power
coverage. Only the Aalborg East and West airfields in Denmark offered a jump-off base for
the longer-range bombers of X Fliegerkorps. Yet the distance between these Danish fields
and any potential threat to German naval forces and isolated ground units holed up in
northern Norwegian fiords, mitigated against their ability to operate effectively in this
region. The Germans did not have to wait long for the British to exploit this weak link in
their defences.

The First Battle of Narvik and the Powerless Luftwaffe

_ Konterdamily_ Friedrich Bonte, the German naval commander at Narvik, was in an
invidious position: cut off over 1500 kilometres from Germany, lacking air cover and
adequate reconnaissance, and aware that the Royal Navy was prowling the waters outside
Ofot Fiord. Moreover, before Bonte could even consider making a dash for home his
destroyers needed refuelling. This was frustratingly slow, since the only tanker to reach
Narvik, _Jan Wellem_, could only refuel two destroyers at a time and this took seven to eight
hours. Bontes’ early warning system was based around U-boats patrolling the entrance to
the fiord, which he also hoped would at least damage any British vessels attempting to
penetrate the fiord. On the evening of 9 April, he deployed three destroyers in the northern
Harjans Fiord and two in the southern Ballangen Fiord, while another guarded Narvik Bay.
The four remaining destroyers lay within the bay itself. The port, however, was in the grips
of winter, and Captain B. A. Warburton-Lee, the commander of the British 2nd Destroyer
Flotilla, which had been part of the force laying mines for Operation _Wilfred_, was able to
slip his five destroyers into the Ofot Fiord at 1600 on 9 April undetected. Then at dawn,
amidst snow flurries his destroyers burst into crowded Narvik Bay. An after-action
narrative detailing the ensuing events described the situation on Bonte’s bridge:

On the destroyer leader the watch hears a shot, nothing is to be seen, but
immediately clamorous bells shrill through the decks: “Alarrrrrm”. The
commander, sleeping fully clothed in the chart-house bursts out on to the
bridge. When he sees the driving snow he only says: Are you crazy? Are
you seeing white mice?” The signalman’s mate on watch is just going to
raise his binoculars in order to determine what the cause of this alarm is in
the driving snow when a hellish din breaks loose—the British are here!54
Just how difficult it would be to retain a foothold in Northern Norway was becoming all too clear back in Berlin when at 0832, the German destroyer *Berndt von Arnim* radioed Germany with the ominous news that a fierce destroyer action was taking place off Narvik. In the ensuing mêlée, the British sank two German destroyers and damaged the remaining three. Warburton-Lee’s withdrawal was not so successful as the German destroyers deployed in the flanking fiords fell upon him. First, the German destroyers in Harjans Fjord struck from 6-8000 yards and then, as the British ships attempted to steam out of range, those of Ballangenfjord emerged from the fog south of fleeing vessels. The more powerful German destroyers sunk one British vessel and damaged another. Warburton’s own vessel, *Hardy*, was in the thick of the battle and her fate was chronicled by one of the survivors:

First they shot wide, then they got us on target. Things got hot. The Germans got a direct hit on us. It was then that Captain Warburton-Lee was hit. . . . The skipper’s secretary, Lieutenant Stanning, took command. By this time we were in a worse condition than anybody else. . . . Soon the steering wouldn’t work. We ran into shallow water and grounded on the rocks about 300 to 400 yards from shore.

Three of the British destroyers escaped, though, since the Germans were reluctant to give chase due to their very low fuel. Nevertheless, the Germans were the losers in the First Battle of Narvik: they had lost two ships and two more were seriously damaged, while three further destroyers were moderately damaged. The British, on the other hand, had acquitted themselves extremely well, especially considering that the German vessels were significantly larger. They lost two destroyers and one was seriously damaged. Adding insult to injury, the British caught the *Rauenfels*—a large German transport laden with artillery, flak batteries and ammunition bound for Narvik—while withdrawing and promptly set the defenceless vessel ablaze. Surprise had given the British vessels an important initial advantage over their superior foes. The failure at Narvik was the failure to provide adequate aerial reconnaissance and support for the destroyers—not that the Luftwaffe was unwilling to assist.

The news that German destroyers were under attack at Narvik brought about a flurry of activity at *X Fliegerkorps*’ headquarters. But the officers there had few options. Using the seaplanes at Trondheim and Stavanger would mean that they would have to land at Narvik, where there was even less aviation fuel than at their fuel-strapped Norwegian home bases. The Luftwaffe’s final desperate option was to dispatch an entire bomber group of Heinkels on a one-way trip. As the battle raged, they requested a situation briefing from the Navy and although too late to influence the outcome of the events of 10 April, *X Fliegerkorps* offered a bomber wing for the following day when the Luftwaffe considered a
“fresh British attack there to wipe out their destroyers and capture the town is probable.”

However, while the German Naval Staff concurred that a “British naval attempt to force Narvik early on the morning of 11 April” appeared “possible, even probable”, “an all out use of a whole bomber group” was judged too high a risk and a few long-range bombers (five to six) that could return was held to constitute a better solution. Yet even five to six long-range bombers were hard to come by in the entire Luftwaffe, let alone X Fliegerkorps. The only plane in the Luftwaffe’s armoury suitable for such a task was the converted long-range passenger aircraft, the Condor. Designed to fly the North Atlantic commercial route, the four-engined Condor was a stop-gap measure to cover the German decision to concentrate on tactical medium-range twin-engined bombers in the inter-war period; a decision ultimately detrimental to strategic bomber and ocean reconnaissance aircraft development (a matter discussed at greater length in Chapter 5). Aside from the eight unarmed Condors used as transports by Gablenz, the only operational armed Condors were those of KG 40’s Long-range Reconnaissance Squadron (Fernaufklärungsstaffel). Given the small numbers of Condors flying with the Luftwaffe, and unavailability of Norwegian bases for twin-engined Heinkels and Ju 88s, X Fliegerkorps was able to dispatch only a single Condor carrying a paltry four 250-kilogram bombs northward from Aalborg to provide air support for the destroyers on 10 April. The aircraft failed to sight enemy forces and returned to northern Denmark.

OKW deemed the situation in Narvik to be very serious and realised that any solution to the problem would be dependent on X Fliegerkorps’ ability to project itself further north and the use of available U-boats to guard the entrance to Ofot Fiord. To achieve this, every effort was made in getting the Trondheim and Stavanger airfields fully functional. At Trondheim, the Vaernes airfield was captured on 10 April and the Germans immediately began the process of making it operational. Moreover, to alleviate the fuel shortage at Trondheim, an inquiry was to be carried out into the feasibility of using U-boats to ferry aviation fuel and supplies northwards. In an attempt to prevent further breaches of Narvik’s Ofot Fiord, and similar forays at Trondheim, the German Navy increased the number of U-boats to eight and four outside the respective fiords. This last measure seemed at the time to be of crucial importance, because although two of the remaining German destroyers were ready to break out that night after refuelling, it soon became clear—based on a U-boat report—that this would not be possible; British destroyers lay in wait inside Bronte Fiord and these were further covered by cruisers in the rear. These forces prevented a dash for German-controlled waters over the night of 10-11 April,
particularly as there was little cloud cover to mask their escape. In fact, these forces would never leave Narvik. Over the next two days, patrolling British vessels and clear weather conditions would have made any attempted flight south suicidal.

The situation in northern Norway was the Luftwaffe’s top priority and its “main task” (schwerpunkt Aufgabe) reflected this: the support of Dietl’s Narvik force. It was hoped that a squadron of He 115 floatplanes could be directed to Narvik and a group of He 111s could be positioned at Stavanger for operations against an eventual enemy undertaking against Narvik. In addition to anti-submarine operations in the Skagerrak and reconnaissance between Bergen and Stavanger, the Luftwaffe’s orders for 11 April deployed KG 40’s long-range squadron of Condors to operate from Aalborg to cover the coast off Narvik. In compliance with the last directive, an active reconnaissance mission was carried out by three Condors and on 11 April the first report was received:

Examined Narvik at 1945 and 2040. Harbour appeared quiet: 11 steamers sunk, 4 German destroyers, one with steam up, three at the pier, and 1 U-boat. Two merchant ships apparently beached. One steamer in the dockyard. Dropped 4 SC 500 kg. bombs on the transmitting station at Tromsoe, without success. All quiet in Harstad. No naval forces of any kind sighted off Vestfiord.

Whilst the Condors were engaged for the most part in active reconnaissance missions over Narvik, the Luftwaffe bolstered its long-range supply efforts by bringing in a handful of four-engined Junkers Ju 90s. Originally designed as part of Germany’s anticipated strategic bomber force, Junkers subsequently adapted this aircraft as a transport for Luft Hansa after the abandonment of the programme in 1937. Added to this small number of Ju 90s was another excellent long-range machine that was never brought into quantity production: the Dornier Do 26 flying boat. Designed to carry mail non-stop from Lisbon to New York, only six of these aircraft were ever made, four of which were already flying with the Luftwaffe when war broke out in September 1939. Given the growing demands of Weserübung, the remaining two aircraft were soon pressed into transportation and reconnaissance duties along the Norwegian coast. As the war diary of the General of the Luftwaffe attached to the Navy Supreme Command (General der Luftwaffe beim Oberbefehlshaber der Marine) records, it was the Führer himself who ordered that all the operationally-ready Do 26s of the Navy’s Transoceanic Squadron were to be subordinated under X Fliegerkorps and deployed in “supplying Narvik.” The Ju 90s would deliver all material that could be dropped in by air, such as provisions and munitions, while the handful of Do 26s would fly in, among other things, fuel. Accordingly, on 12 April, Dietl’s mountain forces received a morale-boosting air drop from a single Ju 90 and supplies from a
5. Aircraft manufacturer Focke-Wulf Flugzeugbau advertises the fact that its long-range Condor was one of the few aircraft that could actually reach Narvik early in the invasion. 

Source: Deutsche Luftwacht, Jahr 7, Nr. 18, Berlin 15. September 1940), p. 361
Do 26. In conjunction with Luftwaffe efforts, Hitler ordered the German Navy to begin the process of supplying Narvik by U-boat. On 12 April, Dönitz directed additional U-boats to join the first vessel already en route, U 43. The manifest of this vessel making its way north reflected Dietl’s most pressing needs; of the total 35 tons of cargo, 15 tons were 2-cm ammunition, 13 tons infantry ammunition, and seven tons mortar ammunition. Despite these efforts, time was rapidly running out both for the surviving destroyers and Dietl’s mountain forces holed up in Narvik.

British Air Power Attempts to Hit Back

In the meantime, the British made air raids against German coastal positions in Norway with mixed results. Aside from a foray by a single Blenheim over Stavanger which destroyed three German aircraft, the first significant enemy aerial attack was made by the Fleet Air Arm rather than the RAF. On 12 April, 15 British Blackburn Skuas—a single-engined fighter-dive bomber—operating at maximum range, raided Bergen at 0805. The Germans were caught completely unawares as the first Skua tipped into a 60-degree angle dive towards Königsberg, its bombs heaving the light cruiser almost out of the water as they barely missed the vessel’s hull. The following Skuas hit Königsberg three times, while other bombs fell close enough to cause further damage. The direct hits reduced the ship to a blazing wreck and, once the fire reached her magazines, the resulting explosion tore her in half and Königsberg capsized. In minutes, the Skuas had become the first aircraft to sink a major warship. The next aerial assault was made by Swordfish biplanes which had finally been loaded upon Furious. After rendezvousing with Warspite near the Shetlands, both the carrier and battleship joined Admiral Forbes’ Home Fleet en route to Trondheim. The total complement of this force was now formidable, and included three battleships, one aircraft carrier, three heavy cruisers, and 18 destroyers. At Trondheim, Forbes hoped to use Furious’ torpedo-bombers to attack the German naval vessels he believed to be sheltering there. Hipper and one destroyer had, however, already left Trondheim on the evening of 10 April, narrowly missing the Home Fleet steaming northwards. Thus when the 18 Swordfish were launched at 0400 on 11 April, the larger prey had slipped through Forbes’ net and only three destroyers were found within the harbour. Moreover, the first air strike by carrier-borne aircraft was a failure for the British, because not a single hit was made on either the destroyers or the U-boat within Trondheimfjord. Although Coastal Command continued its attacks throughout 11 April on coastal targets using London flying boats,
struck at Hardangerfiord, Stavanger and Bergen, the results were limited. The first raid by Bomber Command was also made on 11 April, by six Wellingtons and two Blenheims on Vaernes. Little damage was inflicted on German aircraft, but the runway did suffer some damage which—together with a period of heavy rainfall—limited the airfield’s serviceability.\textsuperscript{70}

The British failure to achieve any kind of success was due to the very changeable late winter weather over the North Sea, including persistent low cloud and very low temperatures which resulted in heavy icing on the wings and tailplanes of the aircraft and made them very difficult to control and resulted in several losses. Add to this a lack of navigational experience over the open sea, the difficulty in finding targets along the lengthy Norwegian coastline and, once a vessel was located, a dearth of expertise in bombing ships at sea—a weakness that would also become evident amongst German aircrew—and it is hardly surprising that in the three days Bomber Command spent trying to harry German warships and supply ships, only one ammunition ship was sunk.\textsuperscript{71} The most concerning feature of raids throughout the campaign, though, was the British failure to make any significant impression on those Norwegian airfields in German hands. Indeed, since the German success in Norway from the outset was reliant on air power, the inability of the British to combat this in the initial stages did not augur well for future operations.\textsuperscript{72} For the most part this was due to the fact that, excluding the south-western extremities of Norway, the greater portion of the country simply fell beyond the range of Bomber Command’s so-called “heavy” bombers; its Hampdens and Wellingtons could barely make Stavanger, and only the greater endurance of the Whitley allowed it to reach as far as Oslo’s Fornebu field or Trondheim’s Vaernes airfield. Moreover, the number of aircraft available was insufficient for the task at hand.

In all, Bomber Command possessed a meagre total of 216 operational aircraft at the time of the invasion, and these included those dispatched to the Striking Force in France.\textsuperscript{73} This represented barely one-quarter of the number of bombers the Germans had at their disposal at this time. Yet even the deployment of a larger proportion of Bomber Command’s aircraft was impractical, due the scarcity of adequate airfields in Scotland and the lack of a long-range fighter for escort duty. This last deficiency was exacerbated in central Norway, because British bombers could only expect to fly under cover of darkness for a very short period, outside of which they remained exposed to Luftwaffe fighters; and moreover, during which targets were very difficult to find. Consequently, although Sola developed as the major objective of British aerial assaults, only an average of six aircraft
raided the field each day for most of the campaign. Unless the British could secure Norwegian airfields for themselves, these obstacles ensured that the bulk of air operations would fall to Coastal Command’s squadrons based in Scotland and northern England. Yet these units were a mixed bag of obsolete and more modern aircraft types—ranging from London and Stranraer flying boats to Hudsons and Bristol Beauforts—which already struggled to carry out duties ranging from escorting Allied shipping to anti-submarine warfare and, in the case of Hudson-equipped squadrons, search-and-destroy missions against German shipping. The Fleet Air Arm was also poorly situated to operate for any sustained time against the German armada or the landings that followed. Southern Norway was at the extreme range of the Skuas based in the Orkneys, and the only aircraft carrier in the neighbourhood was Furious. Thus the British lacked the requisite air power resources to make any impression on the north-bound invasion force, or sustain prolonged air operations against German positions once the latter were established in Norway.

Compounding the lack of suitable aircraft available to hit the Germans where it really mattered—on the captured Norwegian airfields—was the uneven nature of British intelligence. On the positive side, the British were furnished with a “fairly accurate” picture of the German units involved in the campaign by the cryptanalysts who were breaking Luftwaffe Enigma signals in Hut Six at Bletchley Park: Britain’s famous code-breaking centre, euphemistically titled the Government Code and Cipher School (G.C. & C.S.).

Until recently, historians have found great difficulty in determining the value of Ultra material received during the Norwegian campaign. For instance, Ronald Lewin in his 1978 work on Ultra suggested that during the Norwegian campaign “the decrypts were insignificant, providing for example, commonplace details about postings of Luftwaffe personal and some Army traffic”. Little had changed by 1994 when Ralph Bennett admitted some uncertainty regarding how useful the April to May 1940 material might have been “because neither decrypts nor translations are open to inspection”. Nevertheless, since the 1996 release of the G.C. & C.S. Histories it is now clear that the unprecedented volume of intercepts obtained contained invaluable information. Written by the code-breakers themselves at the end of the war, these previously withheld histories reveal not only the sheer quantity, but also the quality of the material made available to the British during the campaign. In the only major campaign prior to Norway, the invasion of Poland, the Luftwaffe had strongly favoured the use of land-line telephone and teleprinter communications over that of wireless, resulting in a dearth of intercepts from which to piece together even a basic intelligence picture of the Luftwaffe’s overall operational structure.
Thus, when Germany invaded Norway on 9 April, the British Air Ministry still had a very incomplete picture of the Luftwaffe order of battle, so much so, that the G.C. & C.S. history of the invasion confessed that "Fliegerkorps and Fliegerführer (Air Leader) were new terms, the significance of which became apparent only gradually."78 However, given the poor communications that existed throughout Norway and the extreme distances involved, the Germans were forced to use wireless signals for even high-level operational purposes. Consequently, when on 10 April the Germans introduced their new Yellow Enigma key for the Luftwaffe and Army, Bletchley Park's Hut Six was awash with signals traffic—which were often decrypted within hours—until the traffic ceased on 14 May.79

As early as 12 April, thanks to these decoded signals, the British—despite drastically underestimating the number of bombers and transport aircraft involved—did have a rough picture of X Fliegerkorps’ mix of aircraft types, which they believed consisted of "at least three bomber Staffeln, a fighter Gruppe, a Stuka Gruppe, two Gruppen of heavy fighters, two transport Staffeln, two long-range reconnaissance units, and one coastal unit."80 As the campaign continued, decrypts started to appear detailing aircraft strengths, the state of airfield serviceability, the results of British attacks, and German ammunition and fuel stock levels. By way of illustration, from 17 April the German airfields at Stavanger, Trondheim and Oslo would report every few days to X Fliegerkorps' headquarters their respective aircraft strengths and from early May, Sola reported its strength daily and sometimes twice a day with a report of anticipated strength for the following day.81 With regard to signals containing information on troop and supply transportation plus the delivery of paratroops, none of the decrypts took longer than one to two days and a good number were completed prior to the operations themselves. The type of information contained in these signals can be gauged from a small sample in April which included information about the reinforcement of Trondheim and Bergen on 15 April, the expected transfer of the 138th Rifle Regiment to Narvik on 16 April and the headquarters of the 181st Division and the headquarters of the 1st and 2nd Battalions of 334 Infantry Regiment which were awaiting transport under the orders of Gruppe XXI at Stade airfield.82

A number of factors, however, mitigated against the productive use of this wealth of intelligence. Initially, the tidal wave of material that followed the breaking of the Norwegian Enigma caught Bletchley Park unawares and lacking the necessary numbers of staff with adequate military experience to evaluate the decrypts. On top of this, in order to conceal the true source of the information, when it was sent to service commanders (who were unaccustomed to dealing with such material) invariably they were informed that it had
been obtained through less sensitive, more common sources such as "information from our own forces." At the other end of the spectrum, many of those in the War Office or the Air Ministry who were aware of the true nature of the intelligence, remained suspicious and unwilling to place too much trust in such an untested source, especially in the confusion that followed the German invasion. Either way, the result was the same: commanders gave the intelligence received via Ultra less credence than, with the benefit of hindsight, we can see it merited. Moreover, once the Allied expedition landed on Norwegian soil on 14 April, even those disposed to make use of such valuable data near the front lines would be unable to do so, because as yet no secure system of communicating such sensitive material had been established, and the British simply lacked enough trained personnel in the field to handle Ultra material.

One of British intelligence's most significant costly sins of omission in this early period would be the failure to recognise the importance of the Aalborg East and West airfields to the Luftwaffe build up in Norway. The main linking point in the logistical and operational network bridging northern Germany and Norway, these fields were invaluable to the Luftwaffe's effort. Yet, despite their relative proximity to the British Isles and obvious importance to the Germans, British intelligence was extremely slow in appreciating the role they played in the consolidation phase of Weserübung. Even after a 17 April reconnoitre of the area by two Hampdens revealed some 50 aircraft jammed "wingtip to wingtip" on one of the fields, it was not until the night of 20 April that Bomber Command actually sent a handful of planes to target them. Although attacks increased in the days that followed the damage had already been done, because the Luftwaffe had had nearly two vital weeks of uninterrupted use of these Danish fields.

The full value of such a rich seam of intelligence was, of course, reduced for the Air Ministry anyway since it did not have the aircraft—in quantity or quality—to make full use of Ultra even if it wanted to. Moreover, the operational employment of the meagre numbers of aircraft on their way to Norway, directed by commanders who did take note of their new signals intelligence, was greatly hindered by a lack of topographical intelligence. In events reminiscent of the hasty German planning two months before, the British scrambled to amass sufficient tourist guides and maps to direct aerial assaults. While British intelligence agencies had collected some data after the outbreak of war, when Allied planning examined possible operations in Norway, the German attack, of course, followed a completely different plan. This left the British short of full topographical intelligence for the areas now in German hands. Incredibly, the pilots of Bomber Command were forced to
make do with Baedeker’s Scandinavia (revised 1912 edition) for their raids on German-controlled airfields in southern Norway, and the early raids on Narvik by naval aircraft from Furious would be dependent on Admiralty charts that lacked contour markings to guide them in poor weather through steep-sided fiords to their German targets.87

The most significant contribution to the British effort by the RAF was made indirectly under the innocuous code-name Gardening and involved the sowing of mines (nicknamed “vegetables”) in areas of the Norwegian coast known to have a high concentration of German naval traffic. The brain-child of Arthur Harris, the future commander of Bomber Command, the magnetic mines were delivered after lengthy flights by Hampdens—which were of little use for anything else—to the target area. Here they were “sown” from a height of no more than 180 metres and at a speed not exceeding 320 kilometres per hour to prevent the 680-kilogram mines disintegrating on contact with the water. On the night of 13 April, the first mines were dropped in Danish and Norwegian waters.88 The results for the British were pleasing and 12 German ships were sunk over the period of the German offensive. Yet the destructive crop resulting from Gardening missions proved to be too little too late to arrest the German tide sweeping Norway and the only real hope lay with operations against airfields.

Luftwaffe Consolidation and the Arrival of Milch

Increasing the difficulties confronting British airmen when attacking German positions on Norwegian soil, were X Fliegerkorps’ moves to consolidate control of central and southern Norwegian airfields. For example on 10 April, Stavanger (the base for Ju 87s) also received nine of KG 26’s Heinkel bombers and additional Bf 110s of ZG 76 from Aalborg. On the following day, more of ZG 76’s Bf 110s arrived along with some Junkers Ju 88Cs—a heavy fighter variant of the Ju 88 bomber—of KG 30 and three reconnaissance “Flying Pencils”, the Dornier Do 17, of 1(F)/120.89 The capture of the small airfield at Kristiansand provided a much needed staging-point for short-range aircraft flying between Germany and Norway, and on 11 April became the operational base for Bf 109s of JG 77 which were to transfer from Denmark’s Esbjerg airfield. At Oslo, Fornebu was reinforced and the newly-captured Kjeller airfield occupied. In addition to these aircraft transfers, Oberstleutnant Gablenz continued the airlift of large amounts of personnel, equipment and supplies throughout 10 and 11 April. At Stavanger, for example, on 10 April 18 He 59s of KG zbV 108 and additional Ju 52s delivered the personnel of the 33rd Flak Regiment, 193rd Infantry
Regiment, and the ground staff and personnel for ZG 76 and KG 26, while on 11 April Ju 52s brought in elements of the 3rd Signals Regiment. This was followed by 235 transport sorties between Germany and Oslo on 12 and 13 April. Yet the arrival of flak personnel for Stavanger did not mean that the Luftwaffe was in a position to deter potential British raids once they had breached the German’s outer aerial patrols. In fact, flak defences remained weak for a considerable time, despite an entry in Generaloberst Erhard Milch’s notebook for 12 April suggesting otherwise.

Milch’s sudden interest in Luftwaffe activity over Norway was, as he boldly scrawled in his notebook on 11 April, based on Göring’s decision to place X Fliegerkorps “under my command” (unter mein Kommando). The creation of the Luftflotte 5 (Air Fleet Five) command, with Milch in the cockpit, was a reflection of the growing operational and administrative demands being placed on the Luftwaffe in Norway. The establishment of a Luftflotte for Norway has been criticised, at least by one commentator, as the “first major instance of over-organisation” which was later to become so characteristic of the Luftwaffe, particularly when in following years the number of aircraft deployed in Norway declined rapidly as they were siphoned off into other theatres. It should, however, be remembered that although Luftflotte 5 had only one Fliegerkorps as opposed to the usual two, X Fliegerkorps numbered over 1,000 aircraft (and these were being supplemented all the time) at the height of the campaign in 1940. In fact, Luftflotte 5 exceeded the size of an “average” Luftflotte by over 200 aircraft, thanks to the large number of transports and naval aircraft subordinated to X Fliegerkorps. Consequently, the establishment of the highest operational entity within the Luftwaffe was not unwarranted, at least in the short term, given the number and variety of aircraft deployed at the time and the vastness of the Norwegian theatre.

The growing importance of the campaign was also emphasised by the appointment of Göring’s second-in-command to head Luftflotte 5. Erhard Milch, who had commanded a fighter squadron late in the First World War, and was director of Germany’s civil aviation company, Lufthansa, from 1925-1933, astutely caught the winds of change sweeping Germany in 1933 and promptly joined the National Socialist Party. Overlooking Milch’s paternal “Jewishness”, Göring appreciated his abilities as a planner and administrator, and appointed him State Secretary for Aviation (Staatssekretär im Reichsluftfahrtsministerium) in 1933, a position he would hold until 1944, and General Inspector of the Luftwaffe (Generalinspekteur der Luftwaffe) in 1939. Although often caustic and egocentric—personal characteristics which did not endear him to a good number of his Luftwaffe
contemporaries—Milch did have a way of cutting through red tape and getting to the heart of seemingly intractable Luftwaffe problems, such as the one now developing in northern Norway. Acknowledging the need to have Weserübung sown-up before the campaign in the West began, and perhaps requiring a potential scapegoat should the Luftwaffe fail in Norway, Göring selected his deputy.97 Nevertheless, given how jealously Milch guarded his position of power in Berlin—where he had direct access to his commander’s ear—Göring’s decision to send him out to the fringes in Hamburg and subsequently Oslo must have been somewhat heart-rending for Milch. Yet the separation was tempered by Göring’s assurances that his deputy would still retain his rights as State Secretary for Aviation and would return as Göring’s representative in Berlin before the invasion in the West. Above all, the “posting” would gain him the coveted Feldherr experience he lacked, and if all went well, put him on a par, at least in his own eyes, with other senior Luftwaffe officers who tended to look down on his lack of operational exposure. As one air power historian has rather ungraciously observed, Norway provided Milch with the opportunity to “punch his ticket.”98 Yet a careful examination of Milch’s notebook and diary for this period—both of which have never previously been applied to an examination of his role in the campaign—reveal that he applied his customary industry to the job at hand.99

Meanwhile, the continuing consolidation of Luftwaffe positions in Norway bore fruit on 12 April. The first German success was achieved by the Bf 109s newly-installed at Kristiansand, when a Hudson shadowing Scharnhorst, Gneisenau and Hipper as they steamed towards Germany was shot down. Then twenty-four Hampdens dispatched to attack the southward-bound German warships failed to find them and made for Kristiansand, aiming to attack naval vessels deployed there instead. The nimble Bf 109s shot down six of the Hampdens, severely mauling many of the remainder. Not that the Hampdens were defenceless. In fact, in what should have been an one-sided affair, the over-confident Germans lost five of their own single-engined fighters by straying too close to the rear gunners of the fleeing bombers.100 Meanwhile, further attacks were attempted by 44 of Coastal Command’s Hampdens and Wellentons on Stavanger, by 19 Fleet Air Arm Skuas on Bergen, and by a dozen of Furious’s Swordfish on Narvik. While the Skuas achieved little at Bergen and escaped with only minor damage, Coastal Command’s raid on Stavanger meet stiff resistance from the newly-arrived Luftwaffe heavy fighters which cut a swath through the bombers. For the loss of only one plane the Bf 110s and Ju 88Cs shot down seven British aircraft and seriously damaged many more. At Narvik, the Swordfish slightly damaged a German destroyer, and severely damaged a Norwegian fishing vessel.
while losing two of their number to anti-aircraft fire. In all, the Germans destroyed 17 enemy aircraft on 12 April. The lesson was not lost on the British and brought about one of the most significant turning points in Bomber Command’s operational history: an end to daylight raids. For the next four years their bombers, with few exceptions, would only fly by night and eventually to terrifying effect over the cities of Germany.\textsuperscript{101}

While the Luftwaffe attempted to close the aerial gap in northern Norway and consolidate its position elsewhere on land, further \textit{X Fliegerkorps} and Naval Air Command West aircraft were engaged in reconnaissance and attacks in the North Sea region. The first big sweep took place at 1500 on 10 April, when ten Heinkel 111s of KGr 100 led an armed reconnaissance mission into the region between the Shetlands and the Norwegian coastline. These “point” aircraft were followed by a 35-strong strike force of KG 26’s Heinkels. Although they sighted enemy vessels, “bad weather” and enemy harassment were enough to prevent any hits on British ships.\textsuperscript{102} The sighting of a British formation southwest of Shetland, however, spurred German efforts and a force of 19 Heinkels from KG 26 and 19 Ju 88s from KG 30 took off simultaneously at 1700 to attack these ships and bomb the naval oil supplies at Scapa Flow. Yet in the face of defending Hurricanes, anti-aircraft fire and poor visibility, no successes were achieved and five aircraft lost.\textsuperscript{103}

A potentially devastating assault, however, was made next day by ten Heinkels of KG 26 while on an armed reconnaissance mission. Flying in the direction of Narvik the Heinkels spotted the Home Fleet steaming northward, about 65 kilometres off the Trondheim coast.\textsuperscript{104} The British formation was reported to include battleships, one aircraft carrier, two cruisers and 14 destroyers. At 1700 the bombers attacked the British warships through a wall of intense anti-aircraft fire. The German pilots claimed hits on a cruiser with two 50-kilogram bombs and the aircraft carrier with a single 250-kilogram bomb.\textsuperscript{105} In reality, only one hit had been made on the destroyer \textit{Eclipse}, which was forced to retire to Scapa. In spite of the limited results, the Germans—with less than a dozen aircraft—had shot another warning salvo across the bow of the Royal Navy by once again showing the danger posed to large naval units lacking adequate fighter protection, which strayed too close to land-based aircraft.

In addition to these operations, the Luftwaffe provided aerial support for the German Army against Norwegian armed resistance from 10 to 12 April. For example, as well as providing the bulk of forces in the southern region, KG 4 bombed opposing ground forces to the north of Kristiansand and traffic around Oslo on 11 April.\textsuperscript{106}
Germans believed that the Norwegian General Staff was holed up at Nybergund, close to the Swedish border, KG 26’s Heinkels attacked the town.¹⁰⁷

The destruction caused by these attacks in pursuit of the king and the government was witnessed by an American, Captain Robert Losey, who had been directed by Washington to collect intelligence in the days after the German invasion. On 15 April, after slipping into Norway from Sweden, he was shown the results of a German raid on Elverum by the Norwegians. He noted in his confidential report that although the church and hospital at one end of the town were untouched, “about a ten square block had been razed completely with not an intact wall left in the area” and “this had been done in a series of attacks over a four hour period, by never more than six planes.”¹⁰⁸ The king, who barely survived the raid on Nybergund on 11 April, decided to move with his son and the government to the Norwegian Army’s headquarters at Lillehammer to the north.

It was here that General Otto Ruge, the Army’s newly-appointed Commander-in-Chief, was endeavouring, as he put it, to “spend miles rather than men” in anticipation of British assistance.¹⁰⁹ His forces were a motley lot, made up of raw recruits and veterans, many of whom, he noted, had “never been under fire of artillery, planes and tanks.”¹¹⁰ The men under Ruge’s command throughout Norway did not “exceed 30,000”, estimated Losey, and “ammunition was very short” since all the arsenals were in German hands.¹¹¹ Moreover, although the Norwegian troops were getting over their “almost irrational fear of German troops,” they still feared the Luftwaffe “which has been constantly conducting observational flights and attacking with bombs and machine gunfire.” With regard to Norwegian air power, Losey ascertained that the Norwegians had only nine aircraft at the beginning of hostilities and “all of these have been lost.” While this last estimation was overly pessimistic because a handful of Norwegian aircraft had survived the initial onslaught, their influence on the unfolding campaign was almost nil as they flew from one place of refuge to another. Ruge summed up the grim situation in his first telegraphed plea for help to the British Prime Minister on 12 April:

We began this war in the belief that the British government would act at once. We were surprised before we had time to mobilise and lost all our aircraft, supplies and stores. I am now rallying a [?few] infantry battalions and two or three batteries, who have had to fight during mobilisation. We are prepared to receive troops at once and act immediately from our side. My King, Crown Prince and government are being hunted by German bombers and were bombed last night. The people are all for fighting but they cannot fight without assistance.¹¹²
The Second Battle of Narvik

British assistance, however, was already bound for Narvik, where the beleaguered German mountain troops still lacked adequate supplies and the trapped German destroyers adequate air cover. *X Fliegerkorps* had been working feverishly to overcome these twin problems but with only limited success. Although in the days following the invasion Vaernes aerodrome at Trondheim had been captured and brought up to operational readiness, its limited capacity meant that by 12 April only four Stukas had been stationed there. At Stavanger the situation was only marginally better, because Allied bombers had damaged the airfield, thereby reducing Sola’s operational readiness. At Narvik itself, though, the situation on 12 April looked a little more hopeful when Dietl advised that Hartviksee, a frozen lake north of Narvik, would be ready to receive land-planes on 13 April.

To utilise Hartviksee, the Germans assembled 16 Ju 52 transports at Oslo’s Fornebu field. Of these, 12 would bear the officers and men of a detachment of 112th Mountain Battalion along with four of their 75-cm mountain artillery and as much ammunition as possible. The importance of the mission was underlined with the inclusion of a communications Ju 52 and the main body would be followed by three further Ju 52s laden with fuel to allow the transports to make the return journey. At 0845 on 13 April, the aircraft carrying the troops and artillery headed northward unaware of the fireworks that awaited their arrival.

Meanwhile, the British decided that Narvik needed to be cleared of enemy naval units. To ensure success of the operation the battleship *Warspite* (a the Great War veteran of 30,000 tons) under Admiral William Whitworth’s flag, provided the nucleus of a detachment including nine destroyers. This force breached the outer reaches of Ofot Fjord on their way to Narvik at about 1100 on 13 April, undetected either by German aerial reconnaissance or any of the four U-boats deployed in that area. *Warspite*’s floatplane not only spotted two German destroyers tucked into Hamnesholm, one-third of the way into Ofot Fjord, but also sank *U 64* at the head of Harjangs Fjord. As the Royal Navy vessels came into view, *Hermann Künne* broke away, steaming deeper into the fiord towards Narvik at 24 knots, loosing off a number of ineffectual salvos at 20,000 metres. Meanwhile the remaining destroyer, *Erich Koellner*, which had been damaged two days previously, made a dash for Djupvik Bay on the southern side of the fiord from where she could launch torpedoes attacks against the incoming British warships. Forewarned by the scouting aircraft, the British used the covering destroyers to overwhelm the isolated
German vessel with torpedo and gunfire before *Warspite* opened up her big guns and finished her off.

Outnumbered and heavily outgunned, four German destroyers (*Luedemann*, *Zenker*, *Arnim* and *Kimme*) under the command of Bonte’s successor, *Kriegsmarine* Kapitän Erich Bey, moved into a blocking position before the port with a view to sinking the leading British vessels or if possible dispatching *Warspite* with torpedoes. To the Germans, *Warspite* suddenly loomed incredibly large. In moments Bey’s destroyers were engaged in a running battle with the British capital ship, which was firing her 38-cm guns over the top of her escorts. A narrative produced after the battle described the scene:

> The first British shells fall in the water of the harbour on the wharf installations and the buildings of the city. . . . It’s the first very heavy ordnance experienced by the destroyer crews. The discharges roar with terrific crashes, the thunder of the heavy guns rumble, echoing from the mountain slopes and gorges around the harbour.

A lone German Condor soaring above the stranded German naval units sent back the following alarming report:

> Six German destroyers fighting a delaying action in Narvik harbour. One British cruiser and six destroyers approaching the harbour. Narvik in the hands of German troops. Weather very bad. Supplies dropped according to plan.

*X Fliegerkorps* was not totally unprepared for this eventuality, but despite a frantic Göring repeatedly ringing Milch throughout the day, ordering him to launch large-scale attacks in support of Dietl, *Luftflotte* 5’s options remained very limited. The *Fliegerkorps* had been ordered the previous day to make available a bomber group to provide air cover for Narvik and indeed 22 Heinkels of KG 26, under the command of *Oberst* Fuch, took off early on 13 April for Narvik. However, at 1105, about 100 kilometres north of Bergen, bad weather hit the flight. Low clouds reduced Fuch’s visibility and he was forced to abandon the mission. The sole aerial support came during the afternoon with the arrival of four He 115s of KüFlGr 106 from Stavanger. The slow floatplanes, however, were in no position to threaten the British warships and were driven off by the heavy anti-aircraft fire of the enemy destroyers around Narvik. The only other aircraft to put in an appearance were the Ju 52s carrying mountain artillery and men which flew in low over the fiord into a hail of fire from the British vessels in and around Narvik. Five of the transports were struck by anti-aircraft fire and two crashed. The remaining aircraft landed on the frozen lake, eight sustaining considerable damage due to the onset of the spring thaw. The signals aircraft
reported that only two aircraft could be considered ready for a return flight, but since the three Ju 52s bearing fuel had not yet arrived this was unlikely to occur.\textsuperscript{123}

Nearing 1400, the German destroyers were still undamaged, but stocks of ammunition were nearly exhausted. Bey ordered his vessels to retire and the British took up the chase. Aided by aircraft from \textit{Furious}, the Royal Navy warships hunted down the German destroyers amongst the narrow fiords. \textit{Furious}'s Swordfish, however, proved yet again inadequate to the task at hand and the ten which arrived failed to score a single hit and two were shot down in the process. The first German casualty though was \textit{Kümmel} which beached herself, only to be struck by a British torpedo. Then two damaged destroyers, \textit{Giese} and \textit{Roeder}, were dispatched. "It's a sight", recorded a Royal Navy Petty Officer from his lofty perch on board \textit{Warspite}, "burning and sinking enemy ships all around us, and our own destroyers search every corner that might hide something."\textsuperscript{124} The remaining resisting destroyers \textit{Zenker}, \textit{Arnim}, \textit{Thiele} and \textit{Luedemann} were holed up in the Rombarks fiord, which at its narrowest point was a mere 500 metres across. Although this precluded \textit{Warspite} from bringing her guns to bear on the trapped German vessels, the enemy destroyers moved in. The British destroyer \textit{Eskimo} was damaged by a torpedo, \textit{Thiele} was run onto the rocks. This last action allowed time for the crews of \textit{Zenker}, \textit{Arnim} and \textit{Luedemann} to escape to shore.\textsuperscript{125}

The one-sided battle had ended. \textit{Warspite} and her dutiful entourage had annihilated the entire German force at the cost of a heavy mauling for \textit{Cossack} and \textit{Eskimo}. The battleship took up position off Narvik, while Whitworth signalled the Admiralty with the news of the destruction of the destroyers plus a U-boat and a favourable situation for the "landing of a party to occupy the town as the opposition had apparently been silenced." Yet he was not so unrealistic as to consider putting a party ashore against an enemy which some sources estimated stood at 2,000 highly-trained men, already dug-in for just such an eventuality.\textsuperscript{126} What was needed was a fully-equipped force ready to take on Dietl's isolated mountain troops. Unfortunately, none were immediately available. Had Churchill not been so keen on 8 April to cast ashore the troops that had already embarked for \textit{Plan R4}, the British would have been in a good position to take advantage of this promising tactical situation.\textsuperscript{127} As it was, a landing did not take place until 15 April, and then 80 kilometres to the north at Harstad on the island of Hinnøy.

For the Germans, the losses were disheartening. "This evening a serious and depressed mood marks the Naval Staff's impression of events" recorded the German Navy's war diary. "Ten of our modern destroyers, half of our powerful and most urgently required
destroyer arm lie shot to pieces, damaged or sunk in Ofot and Rombarks fiords. However, the loss of the destroyers was Dietl’s gain, because nearly 2,500 men were rescued and immediately incorporated into his existing forces, doubling his manpower for the defence of the town. Thus as evening drew on, Dietl’s Narvik Group was able to report that no landing had occurred, although enemy destroyers lay off Narvik, and made an “urgent request . . . for submarines to attack destroyers off Tranoy and Rombaken.”

Torpedo Failures

Ironically, little did Dietl know that U-boat actions in northern waters had proved an abject failure, particularly against those British forces which he had himself seen shattering German destroyers in Narvik during the last four days. As noted in the previous chapter, the Germans planned to use U-boats under Operation Hartmut to provide a protective screen for surface vessels engaged in the invasion, strike at attempted enemy landings and secure German sea communications from Oslo in the south to Narvik in the north. Lying in clusters off the Norwegian coast on 9 April, Dönitz’s forces were in a position to intercept British vessels as they approached the fiords within which German ships were operating. Compared to the difficulties of finding targets in the open sea, the expected Royal Navy responses to Weserübung should have provided the U-boats with relatively easy pickings. The results could not have been more different.

The initial warning bells indicating that something was amiss, followed the First Battle of Narvik. The Royal Navy’s 2nd Destroyer Flotilla slipped between U 25, U 46, U 51 and U 64 unnoticed, under the cover of a snow blizzard. After creating mayhem within Narvik, the British vessels prepared to exit the fiord as visibility was improving. Both U 25 and U 51 were then able to fire a number of torpedoes at the escaping destroyers—but with no success. The torpedoes detonated prematurely; and a wireless report from U 51 noted two failures: “one detonated at safety distance, one after 30 seconds, 100 metres off a large destroyer.” These and other unsettling wireless messages were beginning to paint a disturbing picture for the Navy. Out of 12 torpedoes fired on 10 April, six to eight had self-detonated, that is 50 to 75 per cent, and this was only the beginning of an unprecedented débâcle that could have cost the Germans northern Norway. The next day, Dönitz ordered four more U-boats—U 38, U 47, U 48, and U 49—to the waters around Vest Fiord because signals intelligence was revealing the movement of heavy British forces northward. Kapitänleutnant Herbert Schultz, commander of U 48, made two attacks on a light cruiser en route. Firing a “fan” of three torpedoes on both occasions, they all
detonated harmlessly before reaching their target.\textsuperscript{133} Dönitz concluded that these reports were nothing short of "calamitous."\textsuperscript{134} On 13 April, the U-boats were equally ineffectual. Not only did they fail to prevent the penetration into Ofot Fiord below Narvik, but due to poor weather they did not even spot the arrival of \textit{Warspite} and her destroyers. When the British ships finally did attempt to leave Narvik early the following day, even the Führer’s personal order that the "attack be beaten off by all means" could not inspire the torpedoes to perform.\textsuperscript{135} Once again, \textit{U 48} sent Dönitz the depressing news: "torpedo failures against \textit{Warspite} and two destroyers."\textsuperscript{136} In the German destroyers’ most desperate hour, the U-boats had been unable, largely because of equipment failure, to carry out a primary function: the protection of surface vessels engaged in landing troops. They also failed to prevent Allied landings.

The next day \textit{U 47} (under Kapitänleutnant Günter Prien, the man who sank \textit{Royal Oak} in Scapa Flow), sighted transports disembarking troops, protected by two cruisers north-west of Narvik in Bygden Fiord. An exasperated Prien sent in the following report detailing the events of 15 April:

\begin{itemize}
  \item 2242, fired four torpedoes. Shortest range 750 yards, longest range 1,500 yards. Depth setting for the torpedoes 12 and 15 feet. Ships stretched in a solid wall in front of me. Result nil. Enemy not alerted. Reloaded. Delivered second attack, on surface at midnight. . . . No success. One torpedo off course exploded against the cliff.\textsuperscript{137}
\end{itemize}

The British could not fail to be alerted by the second attack in the narrows of the fiord and Prien barely escaped after running aground whilst being pursued with depth charges. Dönitz tried systematically to determine the cause of the problem bedevilling the torpedoes by making adjustments to the firing methods used, but to no avail. It would not be until after the Norwegian campaign had ended that the Germans would determine that their problems lay in a multitude of factors: defective action of the striker within the contact pistol which occurred at certain angles of incidence; excess pressure in the balance chambers causing many torpedoes to run below their targets; and the susceptibility of magnetic pistols to the strong magnetic fields around northern Scandinavia, resulting in irregular behaviour of launched torpedoes.\textsuperscript{138} All the more damning is the fact that both OKM and Dönitz had been aware of the defective nature of their torpedoes for a considerable time and yet chose to use them in this vital campaign. Inadequate attention to the procurement of effective torpedoes prior to the war, plus as Dönitz later pontificated, testing coupled with an uncritical "attitude by the torpedo Experimental Establishment towards its own achievements" hamstrung the effectiveness of the U-boat arm well after
their scandalous performance during the invasion of Norway.\textsuperscript{139} In the immediate wake of the torpedo failure, and in his post-war memoirs, Dönitz freely lambasted the developers of the poor-performing torpedoes claiming that in “all of history I doubt whether men have ever had to rely on such a useless weapon.” It should not, however, be forgotten that numerous problems associated with the current batch of torpedoes had been catalogued well before Norway. As commander of the U-boat arm since September 1935, surely a good deal of blame for the affair rested with Dönitz himself.\textsuperscript{140}

In the meantime, continued attempts by U-boats to attack enemy vessels achieved nothing other than to put them in danger of discovery—much to the despair of their crews. “How the hell do they expect us to fight with dummy rifles”, exclaimed Prien.\textsuperscript{141} Dönitz concurred and on 17 April, decided that enough was enough and ordered the withdrawal of his U-boats from the Norwegian campaign. They had been singularly unsuccessful and the German U-boat Command was left to rue what might have been; a later analysis showed that excluding minor attacks under less than favourable conditions, U-boats made no less than four torpedo attacks on Warspite, up to 16 on cruisers, 10 to 12 on destroyers and more than 10 on transports.\textsuperscript{142} And the grand total sunk after more than 40 attacks: one merchant vessel. Having read Prien’s after-action report Dönitz summed up his thoughts on the whole fiasco:

The case of \textit{U 47} is a clear example of many attacks which have failed because of defective torpedoes, and have prevented the U-boats from contributing more effectively to the occupation of Norway. Had these failures not occurred, the role of the U-boats could have been far-reaching, since all other conditions were in their favour.\textsuperscript{143}

The failure of the U-boats left a considerable gap in the German ability to throw off the Allied landing that followed the clearing out of Narvik. As soon as fighting began, the British War Cabinet decided that its best option lay with an attack on Narvik and on 11 April the first ships laden with troops and equipment slipped their berths. By 13 April, under the influence of Churchill, the Cabinet began to consider the possibility of deploying some of these troops against Trondheim—dramatically dubbed Operation \textit{Hammer}—supported by flanking operations at Namsos and Aandalsnes. In the end, only flanking assaults were undertaken on 14 and 17 April in central Norway, while the Allied landings (as observed by Prien) began north-west of Narvik on 15 April. The landings had two immediate consequences for their opponents: a crisis in command, and a redoubling of the Luftwaffe’s efforts to shore up the German position.
Chaos in Command

Hitler received news of the destroyers’ destruction badly because he assumed naturally enough that the British were about to make a direct assault on his beleaguered troops in Narvik. Initially, when it became apparent that Dietl’s forces would come under increasing pressure, the Führer had sent a special communiqué to the mountain troop commander ordering him to “defend Narvik area against attack under all circumstances.” However, within 24 hours he was already beginning to have doubts and discussed with OKW the possibility of abandoning the Germans’ northernmost outpost. So began a period which Alfred Jodl, Hitler’s closest military adviser, laconically described as “chaos in command” (Führungschaos). “Terribly agitated”, Hitler saw no alternative for the isolated and poorly-equipped forces in Narvik but to evacuate the town and make for Trondheim. He promptly promoted Dietl on 14 April to Generalleutnant and dictated a withdrawal order to Keitel.

For the first time during the war, Hitler came under real command pressure and was found wanting. The whole raison d’être for the campaign flowed from the need to secure this port to ensure continued iron ore supplies for the Reich and now he was prepared to hand it to the Allies on a plate. Verging on a serious nervous breakdown, the German leader leapt from one impossible scheme to another as he sought a way to withdraw Dietl’s men: a march south to Trondheim; flying them out; and, should all else fail, a retreat into Sweden, from where they (along with the Swedes) could defend the iron ore fields. Halder wrote scathingly in his diary that Hitler’s lame comment after discussing the serious situation with Walter von Brauchitsch, Commander-in-Chief OKH, was simply “We have had bad luck.” Hitler seems to have swung in the following days from periods of great agitation to deep depression. On one particular occasion during the “Führungschaos”, Walter Warlimont—deputy chief of OKW operations staff—visited Jodl in the Reich Chancellery only to find “Hitler hunched in a chair in a corner, unnoticed and staring in front of him, a picture of brooding gloom.”

Out of earshot, however, members of the Führer’s inner circle balked at his withdrawal order. No doubt many concurred with the naval assessment that, contingent on adequate food and equipment, Dietl’s force—now numbering over 4,000—could be expected to hold out for a considerable period in terrain favouring defensive operations. Moreover, there was a certain conviction demanding that, given the great sacrifice of the destroyers, the force should hold on for as long as supplies permitted. Colonel Bernard von Lossberg, Jodl’s army staff officer, refused to send the withdrawal order as it stood.
Tearing up Keitel’s handwritten note, he persuaded Brauchitsch to sign a hastily scrawled message to Dietl congratulating the latter on his recent promotion, adding a valediction: “I am sure you will defend your position, which is vital to Germany, to the last man.” With that, the first day of the battle in Berlin over the battle in Narvik came to an end.

During the next few days, matters remained unresolved and the atmosphere around Hitler was electric with stormy outbursts and gloomy depression as the Führer bordered on a mental breakdown. In the midst of it all, Jodl alternated between offering soothing assurances and firm resistance, gradually bringing Hitler to see reason over the situation at Narvik. On 17 April, he took the matter in hand and explained yet again some basic hard truths to his Führer, who in a “temperamental” sort of way was reiterating that Dietl would have to march south or be evacuated by air. Jodl simply stated the obvious: a march south was impossible; and even an air transport could evacuate only very small units with the loss of many aircraft in treacherous weather conditions, not to mention the effect of the evacuation on the morale of the Dietl Group. “A thing should be considered lost only when it is actually lost”, reasoned Jodl. Even a professor specialising in things Norwegian was dragged from Innsbruck to Berlin to explain the sheer lunacy of expecting Dietl’s forces to traverse the mountainous terrain laying between Narvik and Fauske some 200 kilometres to the south. That evening, beaten down by Jodl’s dogged persistence, Hitler signed the order for Dietl “to hold out as long as possible.” The die was cast and Jodl began the next day’s diary entry with: “Führer is calm again.”
Chapter 4
Air Control of Central and Northern Norway

...the possibility of landing more troops or maintaining the troops then ashore depended entirely on our being able to obtain control of the situation in the air.
Lieutenant-General H. R. S. Massey, May 1946

Whilst Hitler panicked, Milch set about the task of bringing Luftflotte 5 into full operational readiness. The Second Battle of Narvik and the inability of X Fliegerkorps to aid the destroyers rankled with Milch. At 1900 on 13 April, he rushed to Karinshall—Göring’s opulent hunting estate north of Berlin—where, along with the Supreme Commander of the Luftwaffe and Jeschonnek, he drew up plans for extending the Luftwaffe’s operational reach further north. Burning the midnight oil, the three Luftwaffe leaders discussed the future tasks of Luftflotte 5. By the end of the meeting, Milch’s notebook was full to overflowing with plans centred on reconnaissance around the Lofoten islands, directives for attacks on any enemy naval transports and the reinforcement of Trondheim. German air transportation of troops to Oslo and Aalborg was to cease for a period so attention could concentrated on Trondheim and Narvik.

Despite criticism in later years from his rivals, it is clear from the details he scrawled into his diary and notebook throughout this period that Milch rapidly became immersed in Luftflotte 5’s campaign. Although it is true that there is little indication that Milch was a great field commander, he was an excellent organiser and administrator and these skills were essential to laying the foundation for the success of air power in Norway. In part, Milch’s initial reluctance to shift the headquarters of the Luftflotte to Oslo reflected the poor communication links that existed within Norway, especially between Oslo, the main airfield at Stavanger and the most northern base of operations, Trondheim. However, Milch not only attacked this weakness in communications with vigour, but also encouraged the development of new airfields and the consolidation of fields already in use by the Luftwaffe. To carry out this latter task, on 16 April Milch appealed for authorisation to establish three “repair and construction columns” (Reparaturkolonnen) from the civilian population. Ten days later, aided by claims of resistance amongst the local populous and even sabotage, he was granted approval to set up Air Depot Oslo (Luftpark Oslo) augmented by some 200 specialists and tradesmen from Luftflotten 1 and 4. Thus Milch initiated the process of establishing the infrastructure required to support the operations of Luftflotte 5. Although these behind the scenes efforts were hardly the stuff extolled in contemporary and later
narratives, they were Milch’s greatest legacy to the campaign, and from which the front line commanders of 1940 and subsequent years reaped the benefits.

In the meantime, the focus of air operations was about shift south from Narvik as Allied forces landed above and below Trondheim in an attempt to take the city through advancing northern and southern pincers. Initially, as per Milch’s meeting with Göring and Jeschonnek, X Fliegerkorps was directed to give priority to the relief and supply of Narvik, with the most weight given to the development of landing facilities at Vaernes, to which aviation fuel and ammunition were to be brought up. Milch hoped that Trondheim’s airfield would soon be the base for a group of KG 26’s Heinkel bombers and Ju 88C fighter-bombers of KG 30 to operate against Narvik. In addition, further groups from these bomber wings were to be shifted north to Stavanger and Aalborg. Interestingly, in addition to reconnaissance around the Lofoten islands, KüFlGr 506’s remaining squadron was directed to patrol the sea off Namsos and Aandalsnes and in his diary, but not in the subsequent directive, Milch made reference to the possibility of “French transports” appearing in this zone of operations.⁵

The Second Phase-Allied Landings

Milch’s concern regarding possible enemy action in these areas was doubtless derived from the excellent intelligence being provided by the German Beobachtung-Dienst (Observation Service), the section of naval intelligence dedicated to the interception and decryption of foreign wireless traffic.⁶ B-Dienst, which was reading the Royal Navy’s most secret cipher prior to the war, provided the German commanders in Norway with accurate information throughout the campaign, enabling the bulk of the larger surface vessels to escape the clutches of the Royal Navy immediately following the invasion and now providing detailed information regarding the likely sites for an Allied landing.⁷ Thus, on 12 April, B-Dienst intercepted a message which revealed that an attack on Narvik would probably take place in the afternoon of 13 April.⁸ Naval intelligence then correctly predicted, based on further intercepted messages and the departure of Royal Navy vessels from Scapa, that a landing would occur in the vicinity of Hardest on 15 April.

Regarding the Trondheim region, B-Dienst on 12 April intercepted a message detailing a reconnaissance mission by a British destroyer with the purpose of assessing the suitability of Namsos for an Allied landing. By the next day, although the situation on land was “assured in southern Norway”, the Naval Staff war diary warned that the “Trondheim-Narvik area” was “threatened with imminent large-scale enemy landings”, in particular, at
Narvik, Namsos and Aandalsnes. Of these landings, those north and south of Trondheim, where the Germans had only a relatively small number of troops, were to be regarded as the most dangerous from a strategic point of view. Should the city be lost, so would Narvik. However, if Trondheim was held and strengthened, it would open the way for effective aid to Narvik at a future date. Since both Namsos and Aandalsnes were unoccupied by German ground forces, the only impediment to successful Allied landings and subsequent advances on Trondheim were U-boats and the Luftwaffe. Yet, in an admission of breathtaking brevity and understatement, the German Naval Staff were forced to shamefacedly note that their U-boats had “so far not come up to expectations”; the weight of the operations would fall on the Luftwaffe. The Luftwaffe’s immediate tasks were laid out in an order issued by the Führer on 14 April:

Destroy the British which have landed near Aandalsnes, prevent further landings. Attack enemy forces north of Aalesund. Occupy Dombaas with paratroops and take steps to protect it. Use every endeavour to bring reinforcements to Trondheim by air.

The initial landing near Aandalsnes actually took place in Molde Fiord, situated at the entrance to a series of fiords that reach some 50 kilometres inland to Aandalsnes, and was little more than an advance party of some 700 men. Unlike Milch’s work with the Luftwaffe, the Allied landing was a half-hearted, ill-organised effort and the main landings would not occur for two days. Unaware of this, concerned German planners, under Hitler’s orders, hastily assembled a paratroop drop over the strategically-situated town of Dombaas. Located 80 kilometres south-east of Aandalsnes, Dombaas was the junction of one of the only two communications routes, the Gudbrandsdal and Osterdal valleys, linking Oslo to Trondheim. 350 kilometres north-west of Oslo by road and 200 kilometres south of Trondheim, the town of Dombaas appeared to Hitler, the promulgator of the air drop, as an ideal point for the Germans to secure the Oslo-Trondheim railway and slow down the southern pincer directed at Trondheim, while at the same time delaying a link-up between Allied and Norwegian forces in central Norway. Nevertheless, despite the strategic advantages, the Dombaas drop was a complete disaster. Although in a post-war assessment Generalmajor Fritz Morzik, the Wehrmacht’s Chief of Air Transport, felt that it should be considered “a complete success”, in reality rushed preparations and hasty execution doomed the operation from the outset.

A paratroop detachment of 160 men were brought together quickly by Generalmajor Süssmann, Commanding General of Luftgaukommando Norwegen, under the command of Oberleutnant Schmidt and flown to Dombaas in 15 Ju 52s. The weather was
extremely poor, forcing the transports to circle above in search of the target area and thereafter the situation deteriorated further. Ground fire fatally struck one aircraft, resulting in a crash landing that left only eight alive, while seven planes returned home where at least four were written off and one interned in Sweden. As for the remaining paratroops, some were dropped too low and died, whilst others, including Schmidt, were lost in the first engagement against Norwegian forces. Only 45 men survived the flight, the drop and ensuing small-arms fire. The Germans had originally hoped to keep these men supplied by air. However, atrocious weather during subsequent days thwarted the implementation of this plan. For a time, these cold and isolated troops were able to block the road between Oslo and Trondheim and do considerable damage to the communications and rail centre there, yet within the space of six days they were surrounded and forced to surrender on 19 April.13 Süssmann was court-martialled for the fiasco but escaped with an acquittal.14

**British Air Raids and Suffolk**

The Luftwaffe, meanwhile, was making heavy work of fulfilling another of the Führer’s orders: to destroy British vessels and prevent further landings. Indeed, by 19 April, the British had some 6,000 men either side of Trondheim at Namsos and Aandalsnes, in a position to isolate and eventually advance on the German defenders occupying the old Norwegian city. The failure of German aircraft to prevent the landings was due in part to British air support operations. To hamper Luftwaffe efforts against the landings, the British initiated a number of raids (amounting to nearly 200 sorties) against German-held airfields between 14-21 April. These operations delayed the detection of the landings, and meant the Germans were unable to make immediate strikes in strength to arrest the Allied consolidation. The brunt of these British raids naturally fell on Sola, where Milch had arrived at midday on 16 April to get a first-hand look at the front. It was not a pretty sight. The field had been badly damaged overnight by a British raid and although only two aircraft had been destroyed, the landing strip was so badly damaged, and the field so crowded with transports, that when a wing of Ju 88s tried to put down on the field no less than nine were damaged.15 Although only relatively small numbers of British bombers were reaching Stavanger on each occasion, it was all too obvious to Milch that they could do considerable damage, particularly to the airfield’s landing strip, because the field lacked adequate anti-aircraft defences. In his diary he bluntly wrote: “Flak”.16

Milch had to reconsider rapidly his initial assessment of the situation at Sola. Four days earlier, he had written in his notebook under the heading “Flak Norwegen” that the
Germans, only four days into the campaign, either had, or were looking to have, six heavy and four light flak batteries at Stavanger, the centre of aerial operations; three heavy and one light battery at Bergen, the closest operational point to the British Isles; three heavy and two light batteries at both Oslo and Trondheim; and three heavy and one light battery at Narvik. Whether this entry of 12 April was a statement of intent, or what Milch actually believed was already in the field is unclear from his customary abbreviated entry. In any case, it bore little semblance to the reality he now faced. Indeed, a report of 15 April reveals that Stavanger possessed only a single heavy and light battery; Bergen could boast of an additional light battery; while both Oslo and Trondheim had one heavy and two light, and one heavy and one light battery respectively with which to defend their airfields. Jodl, who was watching events in the north with a great deal of interest, pointed to the cause of this shortage of flak defences in his diary entry of 14 April: “Another three Luftwaffe anti-aircraft batteries onboard ship torpedoed by submarine.”

Due to the damage caused by the British bombing raids and the large numbers of aircraft jammed into Sola, the Germans were forced to close it to incoming traffic for a short period and aircraft that could be moved were flown to Oslo to ease the overcrowding. Ironically, though, the raids had a somewhat beneficial outcome for Luftflotte 5 as Sola was fairly empty—only 37 aircraft remained and the majority of these were from ZG 76, KG 26 and Z./KG 30—when the British made another desperate attempt to shut the airfield down overnight, this time by means of a heavy cruiser. At 0630, Milch’s breakfast was disturbed by the sounds of heavy shelling. Suffolk had crept in close to Stavanger overnight, and guided by flares released from a Hudson, subjected the sea-plane base to heavy bombardment for three-quarters of an hour. While the land-based airfield suffered no damage, the sea-plane headquarters were soon set ablaze, four reconnaissance floatplanes destroyed and two others damaged. Having awaken the German defenders, Suffolk ran for Scapa at 30 knots with a handful of escorting destroyers. The Luftwaffe was not far behind.

The ten Heinkels of KG 26 which took off from Sola at 0815 were the first to lash Suffolk. They struck the heavy cruiser twice at about 0825 but were unable to slow her. These were followed by Dornier flying boats from Bergen and Ju 88s from Westerland in northern Germany. Although almost continuous attacks were made by the Luftwaffe—more than 80 sorties over a seven-hour period—against Suffolk, she escaped sinking by a hair’s breadth, limping into Scapa with her “quarter-deck awash”. The German inability to sink the heavily-damaged warship, even after she was reduced to 18 knots, can be
attributed to the vicissitudes of fortune and *Suffolk*’s anti-aircraft defences, coupled with the difficulties associated with high-level bombing runs against vessels taking evasive action under full steam.

Initially, the British had planned on covering the retreat of *Suffolk* with a fighter escort, however, these aircraft failed to meet up with the heavy cruiser and it was perhaps only the arrival of 12 Blenheims which prevented further damage being done. *Suffolk* had only just received a hit to her “X” turret during her dash for home when, “acting like fighters”, the Blenheims, *en route* to bomb Sola, dove upon the Ju 88s which were swarming over the fleeing vessel. They broke up the German attack, saving the wounded *Suffolk* from being sent to the bottom of the North Sea. Thereafter, the Blenheim continued on to Sola, where they added to the general difficulties of the Germans in keeping the base operational. The attack was particularly disturbing for Milch who observed at close hand the inadequacies of the defences at Sola when a non-commissioned officer was struck and killed by flying splinters barely 10 metres from where he stood.

The survival of the heavy cruiser was also aided by its anti-aircraft defences of 16 101-mm guns augmented by two quadruple 40-mm guns. These defensive batteries were suited to deterring the main mode of attack employed by the Germans and the British against naval vessels early in the war—that of high-level bombing. Although not a single German aircraft was knocked out, the combined defensive fire made it extremely difficult for bombers such as the Heinkel to achieve hits against an enemy vessel manoeuvring in the open sea. Of the 33 separate attacks made on *Suffolk*, 21 were of the high-level variety while the most successful—including the hit on the “X” turret—were those made by Ju 88s in diving assaults. The accuracy of aerial assaults increased immensely when aircraft capable of diving on a target were available, as already demonstrated by the success of Skuas when they sank *Königsberg* in Bergen. The Germans at this stage of the war, however, lacked sufficient numbers of Ju 88s to make a significant impression off the coast of Norway, whilst the Stuka dive-bombers based on Norwegian soil were too few and lacked the requisite legs to operate over longer distances.

The lack of bombers capable of accurate dive bombing was compounded by a dearth of torpedo-bombers. While Germany was one of the first countries to investigate the development of an airborne torpedo, establishing its first torpedo squadron in 1916, little was done to follow up this groundwork in the inter-war period. By the end of the First World War, 36,000 tons of merchant shipping and a Russian destroyer had been sunk by aerial delivered torpedoes, but a lack of development after the cessation of hostilities meant
that by September 1939 not a single German airborne torpedo was in production, let alone a purpose-built aircraft capable of delivering it. Additionally, the Luftwaffe lacked adequate aiming and release gear which could be coupled to existing aircraft types deemed suitable for low-level torpedo runs. Consequently, when war broke out, the only available torpedo in the Luftwaffe inventory was, ironically, an improved Norwegian “Horton” torpedo. Yet it would not be until after the Norwegian campaign had concluded that German aircraft such as the He 115 seaplane, the Heinkel and Ju 88 bombers, and the Condor would be adapted to carry torpedoes. Even then, it was not until ten obsolete Swordfish torpedo-bombers had knocked out three Italian battleships in Taranto harbour in November 1940—not only altering the balance of power in the Mediterranean but also heralding the twilight of the battleship era—that Göring seriously spurred on the German development of their own torpedo-bomber force. Had the Luftwaffe possessed more Ju 88s and even a few torpedo squadrons during the Norwegian invasion, Suffolk and her sisters would have suffered far greater losses than they did at the hands of X Fliegerkorps.

The Luftwaffe and the Cancellation of Hammer

The primary significance of the almost continual Luftwaffe assaults on Suffolk was that they confirmed in the minds of many in Britain and the Admiralty, the threat land-based aircraft posed to warships which lacked adequate air cover, and the immediate result was the cancellation of Operation Hammer, a direct assault by the Allies on Trondheim. As the main port and city in central Norway, Trondheim’s strategic significance was immediately appreciated by the Germans and Allies alike. The Allies, for their part, realised that a successful operation against the German force of some 2,000 men at Trondheim would effectively cut the Germans off from the entire northern part of Norway. Geographically, the port is located at a point where the country is pinched at the waist, and lies only a mere 95 kilometres overland from the Norwegian-Swedish border. Moreover, situated at the north-western end of Norway’s central communication axis, linked by both road and rail along the Gudbrandsdal and Osterdal valleys all the way to Oslo, Trondheim, once secured, would provide the logical base from which an established force could drive on the Norwegian capital.

First considered by the Military Co-ordination Committee on 13 April, Hammer envisaged no difficulties in silencing the defensive batteries guarding the entrance of Trondheimsfjord while air cover would be provided by the two aircraft carriers Ark Royal and Glorious, the latter recently transferred into the region from the Mediterranean to aid
the ailing Allied air power situation. Having breached the outreaches of the fiord the main assault would take place near Vaernes airfield, while supporting operations above and below Trondheim at Namsos and Aandalsnes would converge on the city and the Dombaas junction respectively and thereby cover the operation's northern and southern flanks. On 17 April, the attack was laid down to take place in five days time. However, the pounding Suffolk received at the hands of the Luftwaffe on the same date, highlighted Allied concerns for the safety of the considerable naval resources required for the expedition—three battleships with supporting cruisers and destroyers and the two aircraft carriers. As the Joint Chiefs of Staff reluctantly pointed out to the Military Co-ordination Committee, there were at least six reasons for abandoning the proposed direct assault on Trondheim in favour of the converging Namsos and Aandalsnes pincers alone: both Namsos and Aandalsnes were already secured and ready for further landings; the German defensive positions were continually being strengthened at Trondheim; the Germans were probably aware of the likelihood of a landing at Trondheim and would be prepared; the difficulty of making adequate preparations in the short time available; the lack of aerial reconnaissance of the proposed landing sites; and, finally the threat of aerial assaults. Of these, the last was the overriding concern, since Hammer required the "concentration of almost the whole of the Home Fleet in an area where it could be subjected to heavy air attack." Much to the chagrin of Churchill, this assessment resulted in the cancellation of Hammer on 18 April. German air power—or more accurately the threat of German air power—had once again played an important part in the direction that the Allied effort was taking.

It is worth noting that in marked contrast to the German invasion of 9 April, the British counter-operations not only lacked the benefit of surprise, but also the other salient feature of Weserübung, that is, the ability to carry out airborne transportation of reinforcements to follow up seaborne landings. Unlike the Germans, the British had failed to develop a cheap and reliable transport like the Ju 52 in the period prior to the outbreak of the Second World War. On successive occasions in the 1920s and early 1930s, the British were able to deploy a small number of Vickers Victorias and other miscellaneous aircraft as troop carriers; in the evacuation of Kabul in 1929, the disturbances in Cyprus in 1931 and during the fighting in Iraq in 1932, where 25 troop-carrying aircraft transferred a complete battalion from Egypt to Baghdad in six days. However, when these aircraft passed into obsolescence the Air Staff neglected to procure a specific transport aircraft type in the 1930s. Influenced by Hugh Trenchard's insistence that the RAF steer clear of aircraft designed purely as ancillary to British land and sea forces, plus fiscal restraints and the lack
of a decent civilian aviation industry centred on landplanes (as opposed to seaplanes), the RAF did not bother to seek out a replacement.\textsuperscript{35} In this period, only the Bristol Bombay, which first flew in June 1935 and was capable of carrying 24 fully-equipped men, offered the British a true transport aircraft. Yet they failed to appreciate the potential of such a machine and only 50 were built in the years leading up to the war. If the RAF had had anything like the same number of efficient transports as the Germans deployed during this campaign, they would have proved ideal for supporting both \textit{Hammer} and operations elsewhere.\textsuperscript{36}

Apart from a minor attempt to revive the direct assault a few days later, the Allies’ main focus now lay on building up forces at Aandalsnes and Namsos. The effectiveness of these plans were, however, hamstrung by appalling British preparations, which were, to quote the frank official report on the landings: “well nigh disastrous.”\textsuperscript{37} Artillery pieces were loaded without their corresponding detachments and little or no ammunition and the small number of vehicles involved in the expedition were embarked without their drivers.\textsuperscript{38} On top of this, German air power once again was about to play a decisive role not only directly by bringing its aircraft to bear in the field, but also indirectly by influencing decisions being made in London.

Meanwhile, the Germans where unable to fully carry out Hitler’s order to “use every endeavour to bring up reinforcements to Trondheim by air” because on the very day that this directive was given, 14 April, the spring thaw rendered the Vaernes airfield unusable. Vaernes had been serviceable on the 12th due to frosty weather, but the odd warmer day had the potential to reduce the airfield to a muddy quagmire.\textsuperscript{39} These difficulties were highlighted by the very low levels of supplies on hand for aircraft at Trondheim on 14 April: eight 500-kilogram bombs, ten 50-kilogram bombs, 4,000 litres of fuel and 2,600 litres of oil.\textsuperscript{40} Although this problem was somewhat alleviated by the establishment of an auxiliary airfield at Jonsvatnetsee, south-east of Trondheim, which could be used for the arrival of transports, it could not bring about a rapid improvement of \textit{X Fliegerkorps’} logistical position nearer the city. On 16 April, the German Naval Staff war diary noted that although the “seaplane base and the [Vaernes] aerodrome are serviceable”, the “operational readiness of the planes so far brought up, however is very slight owing to the lack of ground staff and the great demands on personnel and material.”\textsuperscript{41} Thus the U-boat were called upon once again to take up the slack by an increasingly worried OKW.

Indicative of the changing focus of the campaign, \textit{U 43} was redirected from her mission to Narvik in the north to Trondheim in central Norway on 14 April.\textsuperscript{42} The other U-
boats intended for Narvik were similarly trained on the main point of effort and were followed in the days ahead by a second wave of converted U-boats bearing vital supplies, including bombs and 130 tons of aviation fuel stored in specially-designed tanks. In all, seven U-boats were deployed in this manner and proved far more effective than their fellow U-boats had been in actual combat. Nevertheless, the number of U-boats available was limited and only the Luftwaffe had the capacity to shore up the German position in Trondheim. This task they only began to accomplish on 20 April, when over 90 Luftwaffe aircraft were finally able to bring in the 359th Regiment Staff with equipment, 208 men and four guns, and 146 men of the 4th Battalion Mountain Troops. This operation was followed up over 23-24 April by a further 120 Ju 52 sorties bringing in further reinforcements, including elements of the 33rd Flak Regiment. The arrival of these forces coincided with a redoubled effort by the Luftwaffe against the Allied landings north and south of Trondheim.

Air Power the Key in Central Norway

Up until this point, reconnaissance and attacks against Allied forces put ashore had been either relatively minor or abandoned due to poor weather. On 19 April, the Führer personally stepped in again, ordering that:

On 20 April the main point of effort (Schwerpunkt) of Luftflotte 5 is to be attacks on the disembarkation at Namsos. Likewise similar operations are to be urgently undertaken against the landings at Aandalsnes. By order of the Führer the towns and rail junctions of Namsos and Aandalsnes are to be destroyed without consideration for the civilian population, the rail line and roads near the these junctions are to be interrupted for a considerable duration.

This order would unleash a veritable hail of fire on Allied positions in both these areas. In atrocious weather on 20 April, about 120 aircraft of KGr 100, KG 26, and KG 30 attacked the enemy. Although cloud lay as low as 200 metres in the fiords, the aircraft struck heavily in accordance with Hitler’s orders. Namsos was on the receiving end of the greater part of the Luftwaffe’s attention. The town itself and the harbour, plus the railway station and rail line all received extensive damage from the bombers of KGr 100 and KG 26. Around Aandalsnes, despite claiming to have hit a cruiser with a 1,000-kilogram bomb and making two hits on a transport, the Luftwaffe was denied any successes due to the poor flying conditions. General Carton de Wiart, commander of the Allied forces at Namsos, was despondent; the wooden wharves had been smashed to matchwood, while all the rolling stock was destroyed. In addition, nearly all the French ammunition and equipment had been
torched in the ensuing blaze. He radioed London the same day to advise them not to send any more ships because there were no longer port facilities to accommodate them and the next day prophetically signalled the War Office: "I see little chance of carrying out decisive, or indeed any operations, unless enemy air activity is considerably restricted."⁵⁰

At first, *X Fliegerkorps* concentrated its efforts against de Wiart's northern pincer of British and French troops as it pushed towards Steinkerjer. The latter were almost immediately threatened by the arrival of German troops on the western flank of de Wiart's positions, by German destroyers still in Trondheim Fjord, and Luftwaffe attacks on Steinkerjer and its connecting roads on 21 April. At the same time, German forces advanced from Trondheim pushing Norwegian units lying in the heart of the country backwards towards the Allied positions. The Luftwaffe flattened the British communications centre in Steinkerjer and both the brigade and battalion headquarters were forced to evacuate.⁵¹ On 22 April, the German destroyers bombarded de Wiart's western flank and Luftwaffe bombers resumed aerial attacks on Namsos and targets in the harbour. In all, KG 4 dropped some 22 tons of bombs around Namsos with relative impunity. Harassed incessantly by the Luftwaffe and without anti-aircraft defences, the Allied position north of Trondheim was particularly grim. The situation in the south was little better. For example, on 22 April, the Allied vessels gathered in Molde and Romsdal Fjords, their disembarked men and the roads leading out of Aandalsnes were attacked by 34 Heinkel bombers from KG 4 and 26, and KGr 100, and 18 Ju 88s from KG 30 and LG 1 which dropped 37 tons of incendiaries and high explosives.⁵²

The appearance of a new bomber wing, LG 1 (Lehrgeschwader or training wing), in these attacks was due to a general reinforcement of the Luftwaffe's strength in Norway in the last two weeks of April, designed to shut down the Allied landings as soon as possible. In recognition of the growing intensity of the campaign, Geisler's *Fliegerkorps* was reinforced on 21 April by two groups of Ju 88s from LG 1, two groups from KG 45 and a squadron of new Condors from KG 40.⁵³ In total, this represented an increase of the fighting strength of *Luftflotte 5* by some 140 aircraft. The transport arm of *X Fliegerkorps* also received a boost with the allocation of a number of prototype long-range seaplanes to KGrzbV 108, including three Blohm and Voss Ha 139A floatplanes, two BV 138s and five Do 26 flying boats, while KGrzbV 105 received two four-engine Blohm and Voss BV 142 prototype airliners.⁵⁴

The most significant operational change was the establishment of a forward command to pursue more effectively the elimination of the Allied positions. *Fliegerführer*
Stavanger (Air Leader Stavanger) under the determined and resourceful command of Oberst Robert Fuchs was created, comprising KG 30 bombers, ZG 76 and JG 77's fighters, and various land-based and coastal reconnaissance units. This eclectic assemblage of aircraft at the Germans' most effective forward base, allowed Fuchs to carry out everything from coastal reconnaissance and assaults on naval craft to battlefield interdiction and the interception of Allied raiders. This latter task was aided—albeit unpredictably—by a newly-installed Würzburg radar installation. In one of the first successful German radar-assisted interceptions of the war, six Blenheims were picked up 40 kilometres out from Stavanger. Consequently, by the time they swooped in low over Sola, Bf 110s were already airborne and diving on their unsuspecting prey. One Blenheim was shot down while the rest broke for home. From 15 April to 3 May, 115 sorties were flown against Stavanger with 14 attackers dispatched by the Germans. These victories were at the expense of 17 Luftwaffe aircraft, eight of them transports, over the period 10 to 30 April. At Oslo, the results of British raids were similarly inconclusive. Up until 5 May, the Allies destroyed 12 German aircraft and damaged another 31 at Fornebu. These raids were blunted by interceptions made by II/JG 77's Bf 109s based at Kristiansand, which for the loss of five of their own aircraft shot down ten British raiders.

The only relief for the Allies was that German air power was not yet sufficiently proficient in attacking naval units to inflict higher casualties in the campaign for central Norway. In total, only three trawlers and a sloop were sunk at Namsos up until 30 April, while at Aandalsnes seven trawlers were lost due to Luftwaffe attacks. As for vessels badly damaged in the same period; Suffolk had been pounded off Stavanger on 17 April; the French cruiser Emile Bertin and the sloop Bittern were damaged on 19 April and 30 April; while at Aandalsnes the sloop Pelican, the flak cruiser Curacao and the sloop Black Swan were badly damaged on 22, 24 and 28 April respectively. This was a meagre catch considering the bountiful targets available and the number of raids undertaken but did not provide much Allied ground personnel in snow-covered positions, trying to avoid the attention of German aircraft.

In order to quell de Wiart's concerns and blunt the aerial bombardment of Allied troops, London dispatched 18 Gladiator biplanes of 263 Squadron to Norway. Symbolic of the Allies' disjointed and shambolic response to the German invasion, the deployment of these obsolete aircraft proved a disaster from the start. While German aircraft continued their sorties against Allied positions, the Gladiators flew from the aircraft carrier Glorious onto the frozen lake of Lesjaskog near Aandalsnes on 24 April. These were soon joined by
four Skuas. Under normal circumstances, a squadron would be supported by a large number of men trained in aircraft maintenance, transportation, administration and even catering, but here the pilots had to rely completely on what local labour could be scraped together.\(^{59}\) Totally exposed on the frozen lake, there was no shelter from either the elements or the enemy. As there were no fuel trucks, aviation fuel had to be carried on sleighs in four-gallon drums. The Gladiator crews soon realised they would not only be carrying out the refuelling themselves, but also the rearming as they only had one armourer to service all 72 of the squadron’s machine-guns.\(^{60}\) These difficulties were merely a prelude to what was to follow.

Having spotted the arrival of the British aircraft the night before, the Luftwaffe set about raiding the frozen base at dawn on 25 April and then continued to bomb and strafe the aircraft and crews at regular intervals over the following eight hours.\(^{61}\) Between 0900 and 1000, a handful of German bombers raided the airfield, destroying four Gladiators on the ground, damaging others and wounding three pilots.\(^{62}\) The RAF crews faced extreme difficulties in getting the Gladiators airborne as the starter batteries were flat and carburettors had frozen. Some of the biplanes did, however, manage to take off and carry out tasks which included some reconnaissance and spotting for the Allied ground forces, in addition to a number of successful air battles with German bombers. Considering the performance of the Gladiators and the unfavourable conditions under which they were forced to operate, the RAF pilots claimed a remarkable 14 confirmed victories during the nearly 48 hours they resided in central Norway.\(^{63}\) Nevertheless by noon, ten of their aircraft had been destroyed either by direct hits or, more often than not, by near misses setting the aircraft ablaze. By the end of the day, only five aircraft were still flyable and these were transferred to another hastily prepared site just before midnight. It was all over by the late afternoon of 26 April. Even the handful of aircraft in a semi-serviceable state were unable to take part in operations since all fuel reserves had been exhausted and in the end the aircraft had to be torched.

The destruction of these aircraft was a great blow to the Allied effort and proved the turning point in the campaign in central Norway. As Lieutenant-General H. R. C. Massey, commander of Allied expeditionary forces either side of Trondheim, later elaborated, the fate of the whole campaign here hinged on air power:

On the 25th April, I was directed by the Chiefs of Staff to submit an appreciation on the situation in Norway. As it appeared to me then, the possibility of landing further troops or of maintaining the troops then ashore depended entirely on our being able to obtain control of the situation in the air. In my appreciation I stated this fact and gave it as my opinion that
should adequate air support be available I had no reason to suppose that we could not hold our existing positions against the Germans, and at a later date eject them from Trondheim. Without it I had little doubt that any further operations would become impossible and that we should be compelled to evacuate our forces from ... central Norway.64

With the loss of the only land-based aerial support in the region, Massey threw in the towel. His assessment of 25 April had been written without any prior knowledge of the decision to attempt to secure some air power support on land at Lesjaskog, but when on the following day he heard of its failure, he realised that any hope of competing with the "German air menace" had disappeared and reluctantly concluded that "evacuation would therefore be necessary."65

Not only was Massey all too aware of the impossibility of continuing operations from Namsos and Aandalsnes, but also of the advance being made by the Germans up through Gudbrandsdal; here threatening a link-up between the Germans in the southern part of the country with their Trondheim-based comrades in arms. Although the main focus of the Luftwaffe in this period naturally was directed against the Namsos and Aandalsnes pincers, support for the German Army forces pushing northward was not completely ignored. Initially, though, the Luftwaffe's effort was not great. For instance, KG 4, which provided the bulk of battlefield interdiction for the Army, made only about 60 sorties against enemy positions in three main raids on 11, 20 and 21 April.66 Aside from the occasional strafing runs provided by the twin-engine Bf 110s of ZG 76, the German ground forces had to rely on short-range army co-operation reconnaissance units equipped with small numbers of Henschel Hs 126s—a lightweight, single-engined, low-flying aircraft which remained the mainstay of the German Army's tactical reconnaissance force until late 1942.

The difficulties of operating in the narrow, steep-sided valleys where much of the fighting occurred made the use of Luftwaffe aircraft in close air support nearly impossible on occasion. Typical of the type of aerial support rendered, and the difficulties experienced by aircraft flying in the valleys, was an ill-fated flight by a Hs 126 on 30 April. While the aircraft was able to support the German's ground forces successfully as they advanced on Dombaas by dropping bombs and flares on likely targets, its low altitude coupled with relatively slow speed made it vulnerable to ground fire which shot it down.67 Consequently, the progress of the Army up through central Norway from Oslo had been slow because of the astute tactics employed by Ruge, who took full advantage of the mountainous terrain which lent itself to defence and the deep snow cover which restricted German movements
6. Operations in Southern and Central Norway, 9 April-2 May 1940

to the roads. In these conditions the Norwegian Commander-in-Chief invariably employed roadblocks and shelled the advancing Germans from elevated flanking positions.68

The Germans realised, however, that the key to finishing the campaign lay with securing the Gudbrandsdal and Osterdal valleys and, to this end, began strengthening their forces for a final twin-pronged thrust through the heart of Norway. Already by 24 April, German forces had reached the halfway point between Lillehammer and Dombås. Two forces were created the same day to carry out the final advance: Generalleutnant Richard Pellengahr’s “Group Pellengahr” consisting of seven infantry battalions, one motorised machine gun battalion (less one company), two artillery battalions, a company of engineers, and a platoon of tanks would advance up Gudbrandsdal, while Oberst Hermann Fischer’s “Group Fischer” made up of three infantry battalions, two artillery battalions, one engineer battalion, two motorised companies of the General Göring Regiment, one motorised machine gun company and a few platoons of tanks would push through Osterdal.69 The Luftwaffe aided these forces when required. For example, on 25 April, Group Pellengahr struck determined opposition at Kvam. Milch’s diary picks up the story on the 27th:

Morning, Falkenhorst here: very down cast. “Without strong air activity progress is impossible!” Agreed. Midday, Kvam and Bagn taken. Gruppe XVI holds its head up again.70

Aerial assaults along with German artillery had successfully dislodged Norwegian and Allied defenders. On 27 April, when Group Fischer came up against stiff resistance at Naavardalen, this was also crushed by the Luftwaffe. Consequently Naavardalen, a mere 50 kilometres from Trondheim, was taken on 28 April and two days later Group Fischer linked up with German forces advancing southwards from Trondheim. Hitler was delighted and extravagantly proclaimed to Rosenberg that this was more than simply the matter of “a battle won”, but represented the winning of the whole campaign. More pragmatically, he proceeded to direct the deployment of pioneers and flak for the consolidation of Vaernes’ airfield.71 Group Pellengahr, on the western arm of the northward advance, reached Otta on 28 April, only 40 kilometres from Dombås.

Despite the relatively small number of casualties caused by the air attacks—in total the Namsos and Aandalsnes’ pincers lost only 1,402 men and 157 respectively to all causes, including capture—the Luftwaffe effectively shut down reinforcement and delivery of supplies into the region.72 Moreover, continual aerial attacks on the Allied communication centres forced the expedition’s headquarters to remain constantly on the move. Thus the Luftwaffe also acted as an intimidatory factor, greatly demoralising the Allied forces.73 The German advance in central Norway, and the failure of the Allies to provide adequate air
cover for their own operations, left the British with no alternative but to abandon the region. On 28 April, the Admiralty informed Admiral Forbes that the forces landed at Namsos and Aandalsnes were to “re-embark . . . as soon as possible.” The decision, of course, coincided with the Luftwaffe’s main effort against the Aandalsnes and Namsos bridgeheads and the subsequent bombardment of the withdrawing Allied forces—despite the fact that the Germans did not fully realise that an evacuation was occurring until relatively late in the withdrawal.

In fact, although X Fliegerkorps’ field commanders (in particular, Major Martin Harlinghausen, the outstanding commander of Fliegerführer Trondheim, who regularly led reconnaissance missions himself over enemy coastal operations), reported that the Allies were in the process of abandoning the areas north and south of Trondheim, the German Naval Staff remained sceptical. Initially, the naval planners assumed that the arrival of significant numbers of Allied vessels in the region was merely a prelude to an assault on Trondheim itself and, even as late as 1 May, felt that although the troops south of Trondheim were clearly to be re-embarked, speculated that they might be transferred to Narvik given the unsustainability of the southern pincer.

**Allied Evacuation**

Nevertheless, with Group Pellengahr and Group Fischer hard on their heels in central Norway, the Allies were hastening to their Aandalsnes and Namsos’ embarkation points. The British tried to cover the evacuations, which took place on the nights of 30 April-2 May and 1-3 May respectively, with attacks on German airfields in the region. Operating from *Ark Royal* the Fleet Air Arm struck at Vaernes, while the RAF raided Sola, Fornebu and Aalborg. Although these efforts destroyed a handful of aircraft, tore up Vaernes runway and so badly damaged Sola that landings there were only possible in cases of “extreme necessity”—hinting once again at what British air power could have achieved had it had sufficient numbers of either carrier-borne aircraft or long-range bombers—it only slightly blunted the Luftwaffe’s ability to attack the embarking forces and the vessels gathering to ferry them to Britain. On 28 April, the full weight of Geisler’s bomber units—KG 30, KG 26, StkG 1, LG 40 and KG 40 (some 90 aircraft in all)—were brought to bear on the enemy. Aerial reconnaissance and naval intelligence had located two Allied convoys heading for Namsos and Aandalsnes and it was on these units that X Fliegerkorps fell.
During the days that followed, the air corps repeatedly struck at the retreating forces, as the aircraft carriers vainly attempted to cover the withdrawal. For example, the air situation reports contained in the German Naval Staff diary’s entry of 28 April, note that about 80 aircraft were involved in the attacks on Allied vessels, sinking two freighters and causing damage to a further five and a couple of light cruisers in the vicinity of Namsos. Elsewhere around Aandalsnes in Molde Fiord and Aalesund, a tanker and transport were sunk and four freighters damaged. Alongside these raids, OKL stipulated that over the “next few days the urgent assignment is the attack on the enemy aircraft carriers . . . lying off Namsos-Aandalsnes.” To effect this, a KG 26 bomber group at Stavanger and a group from KG 30 at Westerland were to remain on stand-by, prepared to act swiftly once the two carriers were located. Overall responsibility for the operation was placed in the hands of Fliegerführer Stavanger, Fuchs, and the Commodore of KG 30. On top of this, OKL directed that as soon as possible, a group of Stukas be transferred to Harlinghausen’s Fliegerführer Trondheim, where these accurate dive-bombers could be brought to bear on the enemy warships. The ability of Vaernes to accommodate additional aircraft was due in good part to Milch’s organisational efforts which bore fruit with the completion of the airfield’s 790 metre long wooden runway on 30 April. Nevertheless, despite the carefully laid plans and a number of determined sorties, mostly by KG 26 and 30, and at least one near miss on 1 May, both Ark Royal and Glorious survived the onslaught. Once again, the difficulties associated with aerial attacks on vessels at sea, even against those of “barn door” proportions, had been highlighted. The threat to the carriers, however, was too much for the anxious Admiralty and both were ordered home, leaving the escaping land forces with no air cover.

Despite the earlier bombing of Aandalsnes and Namsos, the actual British embarkations went off relatively unmolested due to the efforts of the Royal Navy which carried out the loading of the vessels during the small number of hours of darkness available each night. As de Wiart later observed:

In the course of the last endless day I got a message from the Navy to say that they would evacuate the whole of my force that night. I thought it was impossible, but learned a few hours later that the Navy did not know the word.

Having failed to disrupt the evacuation completely, X Fliegerkorps set about intercepting the retreating convoy laden with Allied troops and on 3 May, a reconnaissance flight by KuFiGr 506 floatplanes spotted four cruisers and nine destroyers about 110 kilometres off Folda Fiord at 0550, steaming at high speed on a westerly course. This was followed at
0614 by sightings of a battleship, a heavy and light cruiser and up to ten destroyers 30 kilometres off Vikten Island. It now became clear, even to the German Naval Staff, that an evacuation had been carried out. The Luftwaffe, however, was already swinging into action.

The bulk of the aircraft which struck these British units were the newly-arrived Stukas at Vaernes. Since these aircraft lacked adequate navigational aids with which to find their prey in the expanse of the North Sea, each successive wave of Stukas—totalling around 50 aircraft—was guided to the convoy by coastal reconnaissance floatplanes in the first systematic use of dive-bombers over the sea. The first wave, made up of six Stukas, accompanied by seven Heinkel’s of KGr 100—also a recent arrival at Vaernes—attacked at 0900 without success. The following wave of 14 additional Stukas arrived above the convoy an hour later and began to dive upon the British vessels. The results, at least according to the Luftwaffe aircrew, were substantial. A hit by a 250-kilogram bomb was reported between the forward turrets of a battleship, which half a minute later was followed by a strong explosion and a 500-metre high tongue of fire. Other aircraft saw the conflagration and confirmed that either Hood or Repulse had been sunk. On top of this alleged master-stroke, further hits were made on a destroyer and a transport, and significantly on a cruiser, parts of which were seen to “fly into the air.” In reality, the force the air corps was attacking was Vice-Admiral Cunningham’s Battle Group, which did not include any battleships—let alone the illustrious Hood or Repulse—but rather eight cruisers and ten destroyers. It was one of these latter vessels, the French destroyer Bision whose magazine was hit, that was the source of the observed fire, subsequently going down with the loss of 108 crew members. The fourth wave of Stukas hit the convoy again and submitted the following report on their return:

The attack was renewed at 1400 and achieved two hits by 500 kg bombs on a heavy cruiser of the York class. One bomb hit on the forward third and one on the aft third of the ship. 100 metre high explosion, dense smoke and after 30 minutes the ship sank. The success was confirmed by several eye witnesses.

In spite of the “eyewitness” account provided by the German pilots, the Naval Staff was rightly cautious, and correctly guessed that the Luftwaffe might well have sunk a destroyer rather than a heavy cruiser. Indeed, the destroyer concerned turned out to be Afridi which went down with the loss of 63 lives. On top of these actual losses, three anti-submarine vessels were damaged by near-misses. By the next day, the Germans were still unable to confirm whether X Fliegerkorps’ reports were accurate, but pointed out that if “in fact a
British battleship was sunk, then 3 May must be claimed as the day in which the Luftwaffe achieved its greatest success over the sea.” The announcement of the “sinking” awakened a lively debate on the theme of “battleship vs plane”, and even the German News Bureau (Deutsches Nachrichten-Büro) excitedly trumpeted that “this great success of the Luftwaffe has clearly demonstrated that in this age of air war the ascendancy of even so powerful a fleet can be broken anywhere.” Although the German Navy was quick to pour cold water on rather premature and extravagant conjecture suggesting that the Royal Navy, which was built around a core of battleships, was now obsolete, they nevertheless concluded that even if a battleship had not been sunk by a Stuka:

“It is at least clear that operations by heavy forces in enemy coastal waters—
even when there is no enemy fleet of equal strength—expose the ships to extreme danger, particularly when carried out within dive bomber range, and constitute a risk which Britain will hardly undertake in the future.”

The Role of Air Power in Southern and Central Norway

The significance of events here and earlier in the campaign were not only appreciated at the time but have become a feature of the growing body of literature examining the invasion, highlighting Weserübung’s importance to the continuing evolution of the role of air power in maritime warfare and a corresponding decline in that of the battleship. “It is the first real conclusive proof we have” concurred General Sir Alan Brooke on 2 May 1940, “of the undermining of sea power by air power.” T. K. Derry’s 1952 official history of the campaign also hit upon this theme, concluding that “no degree of foresight could at the time have prevented us from suffering the full effects of German air superiority.” One of the lessons to be learnt from Norway, observed S.W. Roskill in his 1954 official history of The War at Sea, centred on “the effect of air power on the control of the sea.” “It can no longer be doubted”, he continued, “that, if effective air cover was lacking, warships could not operate protractedly and the Army could not be maintained overseas.” As Hubatch in his 1960 campaign analysis pointed out, it was during Weserübung that the impression originated that a strong air force could “reduce or nullify” naval superiority in coastal regions. Writing in the comprehensive Das Deutsche Reich und der Zweite Weltkrieg, Bernd Stegemann echoed Jodl’s comments of 34 years earlier when he observed that the “Royal Navy had been the first to learn that even a vastly superior fleet could not operate successfully in waters dominated by the enemy air force.” Gerhard Weinberg agreed in his magisterial A World at Arms that the “control of the airports in Norway, secured in the first two days by the Germans, allowed them to demonstrate dramatically and quickly early in
the war the critical importance of land-based air power as dominant over seapower and the landing forces without their own land-based air force.\textsuperscript{100}

Numerically, though, X Fliegerkorps' record throughout Weserübung of one cruiser, six destroyers and sloops, a dozen smaller vessels and 21 merchantmen could not be considered overwhelming—especially against the warships—considering the effort devoted to aerial assaults on naval units. As the Norwegian historian, Olav Riste has pointed out, the Luftwaffe's relatively meagre success has led to somewhat divergent conclusions being drawn by others.\textsuperscript{101} Major-General J. L. Moulton in 1966 felt that the British failure could not simply be laid at the feet of German aerial superiority—as influential as this was—but with the British inability to appreciate the demands of three-dimensional land, sea and air strategy.\textsuperscript{102} Riste also points to Liddell Hart's comments which indicate that although air power was the "most decisive factor in German success" its effects were chiefly psychological, and "paralysed the Allies countermoves."\textsuperscript{103} Riste, for his part, favours the Moulton-Liddell Hart thesis, adding that the overall requirements of British strategy at sea figured prominently:

> the range of defensive commitments binding the Royal Navy in 1940 made preservation of the fleet an aim overriding even the comparatively minor danger which the Luftwaffe constituted at the time of the Norwegian campaign.\textsuperscript{104}

Yet the claim that the Luftwaffe constituted a "comparatively minor danger" rests on the fact that the British never attempted to test the thesis by carrying out their proposed incursion into Bergen or the direct assault on Trondheim.

Furthermore, whether the impact of German air power in southern and central Norway was decisive or not in real terms misses the point. The fact is, large surface vessels were far more expensive and time-consuming to build, equip and outfit than a good number of aircraft. In light of this, and because of its large overseas commitment, Britain was not prepared to put the matter of sea power versus air power to the decisive test in a peripheral theatre, when these vessels may very well be needed elsewhere at a later date. Therefore, while the Luftwaffe was prepared to throw any amount of its aircraft at the Royal Navy, the British acted on their real or imagined fears and relinquished supremacy in Norwegian waters to the Luftwaffe. In this sense, the Luftwaffe did play a decisive role during the campaign in severely curtailing Britannia's command of the waves. Their effectiveness against warships operating without sufficient air cover would be more than adequately demonstrated a year later at Crete, where the Royal Navy would suffer an even worse ordeal at the hands of German dive-bombers while endeavouring to evacuate Allied troops
from the island. Nevertheless, Luftflotte 5’s parting shots in May 1940 highlighted the overriding reason for German success in central Norway: air superiority. As undisputed ruler of the air, the Luftwaffe had reduced the Namsos and Aandalsnes bases to matchwood, harassed cold and weary Allied troops at will, threatened to completely shut down the sea approaches, and regularly cut the lines of communication to forward units. In short, the Luftwaffe had made the whole British operation untenable.

The Third Phase—Narvik

Since the main concern of OKW from the third week of April until early May lay in ejecting the Allies from the Trondheim region, the number of German aircraft carrying out sorties around Narvik had been negligible. The most encouraging action in the far north prior to this period had been a near miss on Furious on 18 April, forcing the carrier to retire from the theatre. Nevertheless, in the wake of Hitler’s order of 20 April directing the Luftwaffe to concentrate its efforts on central Norway, support for Dietl’s isolated group arrived intermittently in the form of single Condors making overflights of the port, where they dropped small amounts of supplies, attacked ground targets and generally gathered reconnaissance information. This amount of support was totally insufficient to meet the demands of even Dietl’s small force of only 4,600 men; of which 2,600 were survivors of the beached German destroyers, armed with weapons taken from captured Norwegian stocks held at Elvegaardsmoen. Two of the three mountain battalions were deployed 25 kilometres north of Trondheim, while the remaining battalion was positioned in Narvik itself. The naval personnel had been dispersed over three areas: on the eastern shore of Herjangs fiord; along the rail line linking Narvik with Sweden; and in support of the mountain troops in the town. By the time the Germans had ejected the Allies from Namsos and Aandalsnes the position of Dietl’s meagre and ill-equipped troops in and around Narvik was growing increasingly tenuous, especially as the Allied expeditionary troops began to tighten their noose around the port.

Since the first landing on 15 April, the Allies had built up a considerable force around Dietl’s position. The Allies, however, were hampered by the failure of the War Cabinet and Chiefs of Staff to establish a clear chain of command in northern Norway, where both the Navy and Army commanders were independent and only responsible to their own service chiefs. Hence, to achieve anything, a high level of personal co-operation was required from the commanders on the spot and this never occurred. The energetic and determined Admiral Lord Cork, commander of the naval effort, pushed immediately for a
7. The Situation at Narvik, 7 May 1940

direct assault on Narvik from the sea, while the thorough and methodical Major-General P. J. Mackesy, commanding the land forces, favoured a more cautious approach which would allow for a slow build up, followed by an overland advance. Although Cork outranked the General, he had no authority over Mackesy, and due to the lack of landing craft and suitable sites elsewhere for an amphibious assault, the quay itself was the only feasible point of attack. Mackesy argued that such a frontal assault would be impossible unless a naval bombardment destroyed the concealed machine-gun posts. Under considerable pressure from London for action—and from Cork, who in turn was being chastised by Churchill for inaction—Mackesy acquiesced to the direct attempt on 24 April. Despite a three-hour naval bombardment of the town, led by Lord Cork in the cruiser Effingham, and including Waspitie, it was impossible to ascertain its effectiveness on the defenders thanks in part to atrocious weather conditions including high winds and snowfalls which greatly cut down visibility. Reluctantly, and probably fortunately for the troops assigned to the landing, the operation was called off. Nevertheless, the Allies were now compelled to find an indirect route.

Although the shelling of the town on 24 April apparently made little impression on the defenders, it did, however, illustrate the freedom of movement afforded the Royal Navy in northern Norway, and was followed by the landing of British and French troops to the north and south of the town on the night of 28-29 April. Although the Allied advances were slowed by heavy snow drifts, and a lack of trucks and coastal steamers to support the forward units, Dietl became increasingly agitated about his own lack of supplies and his weak forward force, Group Windisch, at Elvegaard (some 20 kilometres north of Narvik by road), which was attempting to cover the German northern flank. On 4 May, he made his feelings known to OKW in a pointed communiqué:

Request support for the following: (1) In spite of repeated and urgent requests, I have received neither snow-shoes nor snow-glasses. Detachment is as a result at a great disadvantage vis-à-vis the Norwegians, who are splendidly equipped and extremely mobile in the snow. (2) In spite of urgent requests, we have had no supplies dropped by air for five days. The serious position of Group Windisch regarding ammunition and provisions can only be remedied by the air since, owing to the difficult terrain, German forces cannot bring up a sufficient supply. Group Windisch cannot hold out unless supplied soon, particularly with ammunition.

Under these conditions, the Luftwaffe had four main tasks: to supply and reinforce Narvik; to hinder the advance of the British, French, Polish and Norwegian troops converging on the town; to attack Allied shipping supporting the advancing forces; and lastly to support a German overland advance on Narvik.
To fulfil these tasks Geisler’s air corps was reorganised, partly to deal with the situation in Narvik but also in preparation for the major German offensive in the West, *Fall Gelb* (Operation Yellow). On 4 May, Milch received Göring’s summons for the coming campaign and, along with Geisler, was awarded the coveted Knight’s Cross for his efforts in Norway. Milch was replaced by the portly Generaloberst Hans-Jürgen Stumpff. A grenadier officer in the First World War, Stumpff became a General Staff officer in the Reichswehr during the inter-war years. In 1933 he transferred to the Luftwaffe as head of the Reich’s Air Ministry Personnel Office, and from June 1937 to January 1939, served as Chief of the Luftwaffe General Staff. Subsequently, he took up the reins of *Luftflotte 1* prior to his Norwegian posting. Like a good number of military commanders in the early part of the war, Stumpff had little operational aviation command experience. Moreover, like his predecessor he excelled in administrative matters. In the short term, this forced him to rely on his previous army experience, which as we shall see did not always greatly impress his subordinates, but over time he became a more than competent commander in Norway under very demanding circumstances.

Milch’s departure also heralded the withdrawal of a substantial number of aircraft from the theatre for the invasion of France and the Low Countries. Bomber units of KG 4, KG 30, KG 54 and LG 1, and twin-engine fighters of ZG 1 were transferred south along with nearly all the transport aircraft excluding those of KrzbV 107 and 108. Only slightly offsetting these withdrawals were the arrival of a squadron of (J)/LG 2 and a group of Me 110s of ZG 76, while a squadron of JG 77’s fighters were deployed at Vaernes. Organisationally, Harlinghausen—who, for his earlier efforts along with Hauptmann Paul-Werner Hozzel, the commander of the Stuka group at Vaernes, was awarded the Knight’s Cross—was now placed in command of *Fliegerführer Stavanger*. His complement of aircraft numbered around 80 fighters and reconnaissance aircraft, whilst further north Fuch took over *Fliegerführer Drontheim* which had been strengthened to 190 aircraft, including most of the bombers in Norway. From Trondheim the Heinkels and Ju 88s could reach Narvik, but as yet, without an intermediate airfield, the feared Stukas of *Fliegerführer Drontheim* were restricted to operations in support of an overland advance north from Trondheim by the Army. Additionally, conditions at this latter field were less than ideal and the number of aircraft now crowded onto Vaernes stretched the ground crews and the base facilities to the limit. Given these trying conditions, it was not surprising that on occasions they got the better of aircrew and ground staff. For example, with the transfer of KG 26 to Trondheim on 6 May, the time appeared ripe for decisive action against the Allied positions
around Narvik. These good intentions, however, were dampened when a flight of 18 aircraft planned for the following day had to be abandoned when water was discovered in the fuel lines. Apparently the aviation fuel had become contaminated on its journey via U-boat to Trondheim, much to the frustration of all concerned. In addition to these, 177 aircraft of Geisler's X Fliegerkorps (including the remaining Ju 52s) remained in support of Luftflotte 5.

Air Support of the Advance on Narvik

In spite of fuel problems and cramped conditions at Vaernes, the Luftwaffe began its support of the advance from Trondheim to Narvik of the 2nd Mountain Division and the 181st Infantry Division under the command of Generalleutnant Valentin Feuerstein. The Luftwaffe was to work in close co-operation with Feuerstein's force, providing reconnaissance information and supplies via parachute drops and seaplanes. The ground forces, as well as pushing northwards, would be on the lookout for an "intermediate landing field between Trondheim and Narvik" suitable for the use of Stukas. Such a field would enable the relatively short-range dive-bombers to take part in aerial bombardments of naval and land targets at Narvik and then stop-over at the intermediate field for refuelling on the return leg to Trondheim. In a straight line, the distance between Narvik and Trondheim is 480 kilometres, and the terrain mountainous and frequently cut by steep-sided and snow covered fiords. On top of this, the roads were of extremely poor quality and for at least a quarter of the distance simply did not exist. So rugged is the terrain that the Allies considered it impassable, and instead of withdrawing their Namsos force overland towards Narvik in a delaying action, decided to establish points of resistance by naval landings along the projected German advance at Mosjøen and Bodø. To this end, two Allied companies were landed at Mosjøen and three at Bodø, while a further company was landed at Mo. Norwegians in the area totalled no more than a reserve battalion and another battalion retreating north from Namsos in the wake of the Allied evacuation.

Group Feuerstein's progress over the "impassable" terrain to the north was impressive and within four days it had covered nearly 145 kilometres, taking Mosjøen on 11 May. The next day, the Germans launched Operation Wildente (Wild Duck), a sea and airborne advance from Trondheim to the Hemnesøy Peninsula in the fiord at Mo. In all, a company and a half were delivered by coastal steamer and seaplanes just behind the Allied front. Their position remained precarious until eased by 44 Stuka raids undertaken by the Luftwaffe in "very unfavourable weather" on 12 May and the advance of the main body of
8. The Advance of the 2nd Mt. Div. towards Narvik 5 May-13 June 1940

German troops. Nevertheless, Feuerstein's progress was held up a few days later when he met the first real British resistance in the region at Els Fiord, 40 kilometres north of Mosjøen and Fliegerführer Drondheim was reminded that "Division Feuerstein will be supported by reconnaissance, by supplies and by Stuka attacks." It was also reported on 16 May that ground forces had located an intermediate airfield suitable for Stukas at Hattfjeldal, and it was hoped that the dive-bombers could be using this base in the near future to bring weight to bear on the Narvik situation. In addition to these duties, a minor paratroop landing of 14 men was carried out on 17 May around a pocket of determined resistance at Stien. Dropped on the westward flank of British positions by four Ju 52s in support of a flanking move by ground forces to the east, these paratroops played a part—albeit minor—in forcing the British units to fall back north of Mo, allowing the Germans to occupy Stien and then Mo on 18 May.

By now, the Allied forces numbered some 4,500 men deployed north of Mo and in the region of Bodø; arrayed against these units Feuerstein's force, which had been growing all the time, now numbered at least 6,000. Given the difficulties of the terrain, however, the numerical difference was not substantial, although the Germans were supported by a small number of tanks, artillery and of course the Luftwaffe. Moreover, a good portion of the Allied force was not deployed at the main point of effort above Mo and reinforcements from Bodø were slow to filter south. The assembly of British troops at Bodø also suffered a set-back with the sinking of a transport and the grounding of a cruiser carrying troops on 18 May. The cruiser Effingham had struck an uncharted rock and Fliegerführer Drondheim's Stukas were dispatched to sink the stranded vessel. However, by the time they arrived she had already capsized and they instead proceeded to attack and sink a nearby transport. By 28 May, the Germans were within sight of the main Allied position at Fauske, only 45 kilometres east of Bodø.

Events in another theatre now came into play. On 24 May, based on the disastrous events in France, the Allies decided that the expedition in northern Norway was to be wound up. This being the case, there was no longer any reason for continuing the delaying action south of Narvik. The evacuation via Bodø of the Allied troops was carried out uneventfully on 31 May with one prong of Group Feuerstein close on their heels, while a second pushed northward towards Narvik through a trackless and inhospitable wilderness.

Of importance to the Luftwaffe though, was the appearance of three Gloster Gladiators operating from Bodø in the last few days of Allied resistance, because it heralded a renewed attempt by the British to provide something close to adequate aerial support and
erase the disaster of Lesjaskog. On 26 May the Gladiators were sent to Bodø, and from here they were to provide air cover for the retreating troops. Bödo’s airfield, however, was not up to the task as the pilots found to their great displeasure when they landed on muddy ground. Nevertheless, with German aircraft flying over the field at regular intervals, two of the refuelled Gladiators managed to extricate themselves from the quagmire and claimed to have shot down four German aircraft.\textsuperscript{123} It was proposed to supplement these Gladiators with a dozen Hurricanes from \textit{Glorious}, but the soft ground caused two of the seven which did touch down to nose over; the last five aircraft flew on to the main British airfield north of Narvik at Bardufoss. Of course the Luftwaffe, which by now was only too well aware of the presence of the base and the retreating Allied soldiers, made plans overnight for not only its destruction, but also that of the Bodø township. The Luftwaffe’s attack was recorded in the diary of one of the Gladiator pilots:

Suddenly at 0800 hours, the balloon went up. There were 110s and Ju 87s all around us, and the 87s started dive-bombing a jetty about 300 yards from the aerodrome. . . . we watched the dive-bombing in terror.\textsuperscript{124}

Although Stukas and Heinkels reduced the town to a fiery wreck and destroyed the runway, this was not before a good number of the undamaged RAF aircraft had taken to the air, where they shot down at least one Stuka before departing for Bardufoss.\textsuperscript{125}

\textbf{Bardufoss and Luftwaffe Limitations}

The best equipped and prepared British airfield in Norway, Bardufoss was to demonstrate how dangerous a well-established enemy airfield on Norwegian soil could have been to the Luftwaffe, because while it remained operational it enabled the Allies to gain at least some air parity in northern Norway.\textsuperscript{126} With the assistance of some 600 locals, the one and a half metre deep snow cover had been removed at Bardufoss, the field extended, and an anti-blast screen constructed to prevent the destruction of aircraft from anything other than a direct hit. Drainage trenches followed, to prevent the field being reduced to a muddy bog when the thaw set in, and serviceable air-raid shelters and base headquarters were built. Anti-aircraft defences were provided by a single heavy battery and a light battery, which, along with all supplies and equipment, had to be brought up to Bardufoss by a narrow 27 kilometre track from the nearest port at Sørresia. By 21 May, all was ready for the first arrivals and within two days, 14 Gladiators of 263 Squadron had arrived. These were detailed to run cover patrols over Bardufoss itself, the Allied expedition’s headquarters at Harsted and the fleet in Vaagsfiord.\textsuperscript{127} A Heinkel straying over the airfield became the
base's first victim on 24 May and was soon followed by other victories when a patrolling aircraft shot down a Condor and two Blohm and Voss floatplanes. Bad weather then set in, restricting the Luftwaffe's offensive operations around Narvik to almost nil on 26 May and 27 May, giving the British more time to consolidate their Bardufoss position and on 26 May, 46 Squadron (equipped with Hurricanes) arrived. Thus the base would be ready for the most important part of the Allies' ill-fated expedition: the capture of Narvik and subsequent withdrawal from the region.

Prior to this, the Luftwaffe made strenuous efforts to fulfil their three other roles: attacking Allied shipping and ground forces, and supplying Dietl's units. Despite the poor weather prevailing in the region and the noted fuel problems, Fuch's aircraft began the task of harrying Allied surface vessels in the Narvik area. Making 205 bomber sorties between 1 and 10 May, they sank the Polish destroyer Grom, damaged the Royal Navy cruiser Aurora, and on 18 May the battleship Resolution was so badly damaged that she was forced to retire to Scapa. At the forefront of these attacks around Narvik were KG 26, KG 100, LG 1, and, after mid-May, recently returned units from KG 30. In the last half of May, these aircraft—aided by the arrival at Trondheim of over a dozen steamers laden with sorely-needed bombs and aviation fuel—repeatedly attacked Allied vessels operating in support of the expedition to Narvik. The bombers destroyed and damaged more than a dozen warships, transports and storeships, including, on 26 May, the cruiser Curlew.

In addition to these sorties, the Luftwaffe examined the possibility of mining the fiords around Narvik, in particular Rombaken Fiord, where Royal Navy vessels operated with relative impunity. British cruisers and destroyers had already bombarded German positions along the rail line, and to restrict Royal Navy vessels from further shelling this area, Dietl requested that Rombaken Fiord be closed at its narrowest point, the Straum Strait, by mining carried out by U-boats or aircraft. Given British naval ascendancy, though, U-boats were precluded from the equation by OKW, thus leaving the Luftwaffe to attempt sowing the waters with TMAs (non-contact moored mines) along the lines of the RAF's successful Gardening campaign in the Kattegat and Skagerrak. Although both the British and proposed Luftwaffe operations centred on aerial mining, the similarities between the two operations end there. For a start, the British Gardening campaign was carried out by dropping the mines at low altitude, whereas the TMAs were placed after an aircraft actually touched down on the water. This meant that the Luftwaffe would be forced to divert some of their limited number of floatplanes, currently engaged in valuable reconnaissance missions, to carry out mining missions whose efficacy had yet to be proven.
9. The Situation at Narvik, 17 May and 6 June 1940

Moreover, due to the limited range of the most suitable aircraft, Dietl’s proposal was simply beyond the range of the majority of German float and seaplanes flying from Trondheim. Only after Group Feuerstein secured Mosjøen in the second week of May was the Luftwaffe in a position to even contemplate attempting the operation.

It was from Mosjøen that Naval Air Commander East, who oversaw the proposed mining, reported on 23 May that a Kette (a formation of three aircraft) of He 59 floatplanes had sown a single mine each off the southern shoreline of Straum Strait. With the successful deployment of these three mines, Luftflotte 5 proposed an enlarged minelaying campaign in these waters and put in a request for additional mines. The only problem was that only nine TMAs existed in the entire Wehrmacht inventory. It also appears that the mines were inadequate for the task, because those sown in Rombaken Fiord did not prevent British warships advancing into the fiord, nor did those sown elsewhere achieve any result. Later mining operations in early June were similarly unsuccessful.

As the Luftwaffe gamely struggled to hamper the Royal Navy’s freedom of movement around Narvik, it also hoped to shore up Dietl’s defensive positions within the town, along the rail line and Group Windisch’s situation to the north. While the Swedes had reluctantly acquiesced to rail transportation of rations, medical supplies, clothing, ski equipment, and some specialists via Sweden (the first arriving on 26 April), they would not allow ammunition and troops to be carried on this route to Dietl’s supply depot, established just within Norwegian territory at Bjørnfjell. The bulk of ammunition and supplies, therefore, had to be brought in by air and some 260 long-distance transport sorties by Blohm and Voss and Dornier flying boats, Condors and a small number of Ju 52s, were undertaken between mid-April and the first week of May. In addition to this, they successfully delivered two mountain battalions and artillery. Although a good many transports had been transferred to Germany in preparation for the Blitzkrieg in the West, most of these were Ju 52s which, in any case, could not participate fully in the flights to Narvik since no suitable airfield existed around the town. Thus airdrops became the predominant means of supporting Dietl’s forces, and the types and amounts of materials that were delivered in this period can be seen in the following signal sent by the Luftflotte to Göring on 18 May, detailing a successful aerial drop:

For the supply of Groups Windisch and Dietl, there were dropped in Narvik: 16 heavy machine guns, 2 heavy grenade throwers, 31 cases heavy grenade thrower ammunition, 6 cases mortar ammunition, 12 anti-tank rifles, 14 cases AT rifle ammunition, 12 pieces MG receivers, 6 cases infantry ammunition, 10 cases SS, SMK, and SMKL, 6 aerial delivery units with infantry ammunition, ... 2 cases MG-belts, 285 kg mail, 2 packages with Swastika
flags, 1 case of films, 3 cases dry fuel, 34 cargo chutes were used. Total weight 5872 kg.\textsuperscript{134}

One of the first attempts to bring additional mountain troops to Dietl took place on 8 May, when six Dornier 26 flying boats made their way to Narvik, escorted by bombers which would keep British vessels in the vicinity of the town occupied while the naval aircraft landed, disembarked their human cargo, and then took off. Poor weather prevented four of the aircraft reaching their destination, while the two that did so were forced to carry out their mission largely unaided since most of the accompanying bombers had also turned back because of the conditions. Ultimately, one of the flying boats crash-landed after being attacked by three British fighters. The loss of the flying boat highlighted the vulnerability of these cumbersome aircraft when faced with single-engined British types and orders were drawn up advising that from now on, Do 26s were only to be employed “under the protection of bomber and long-range fighter (Zerstörer) aircraft.”\textsuperscript{135}

Despite these measures, this type of operation was clearly too risky as it was dependent on several variables. The most important of these was the need for both the transports and the bombers to arrive over the region at the same time, so that the latter could divert British attention away from the flying boats which, after touching down, were dangerously exposed to enemy fire including gunfire from naval vessels. Although a number of other similar flights were still undertaken to deliver items such as artillery and radio equipment, the bulk of the men were brought in by Ju 52s in paratroop drops near Narvik, once a suitable drop zone had been located by reconnaissance aircraft. In all, around 650 men were flown in this manner between 23 and 30 May.\textsuperscript{136} Yet, as time drew on, the Luftwaffe’s capabilities began to be noticeably stretched. This was no more evident than in the paratroop drop of 23 May. With the opening of the campaign in the West, Norway became a sideshow in the eyes of many German commanders and as such could no longer draw on the resources it once had under Milch’s leadership. Consequently, having exhausted nearly all of its fully-trained paratroopers in earlier drops over Narvik, Stumpff could only gather up 66 men aboard seven aircraft for the operation; and, moreover, the only training these intrepid souls were given for the mission was a hastily-arranged ten-day course in parachuting.\textsuperscript{137} Jodl, who still kept one eye on the Norwegian campaign, was relieved to note that despite receiving such an inadequate grounding, there were “no losses” among the men.\textsuperscript{138}

Despite this valiant and energetic attempt by the Luftwaffe to shore up Group Dietl’s position and restrict the movement of Allied ships in and around Narvik, they, along
with poor weather, could only slow rather than halt the approach of the British, French, Polish and Norwegian ground forces closing in on Narvik. Since late April, the Allies 27,000 soldiers had heavily outnumbered Dietl's beleaguered force of 6,000 men. Moreover, the Allies were ably supported by an artillery force of 24 guns and an anti-aircraft component of one heavy and four light batteries. These units, now under the command of Lieutenant-General Claude Auchinleck, who had replaced Mackesy, moved on Narvik in the third week of May aiming to capture the town and destroy the iron ore handling facilities before withdrawing to Britain.

Dietl's withdrawal from Narvik

On 27 May, reconnaissance aircraft reported that enemy naval units lying off Narvik and within Rombaken Fiord were subjecting the town and the rail line to heavy bombardment. The shelling was intense and the daily Luftwaffe report tersely noted that “Narvik was burning.” The next report, in the early hours of the following day, revealed that no less than ten warships were bombarding the town, and at 0130 German positions at Hestafjell were under attack. Group Narvik urgently signalled for air support and, on account of the heavy shelling by naval units, also pointed out ominously that an enemy landing near the town had been achieved with the support of Allied air power. All available aircraft were scrambled to aid Dietl, including—for the first time—Stukas now operating from the intermediary airfield near Mosjøen. Initially, the war in the air went the Luftwaffe’s way on 28 May, because dense fog cloaked Bardufoss, allowing the Germans free rein against naval vessels supporting the assault on Narvik. The Stukas struck Lord Cork’s flagship (now the anti-aircraft cruiser Cairo) twice, so badly damaging her that she could no longer provide air defence fire, while near misses on the cruiser Coventry delayed the insertion of a French battalion. Luftwaffe aircraft, including Ju 88s and Heinkel bombers from KG 30, KG 26 and KG 100, plus some Bf 110s, bombed and strafed Allied ground positions as witnessed by the following account from a soldier in the Polish contingent as it captured Ankenes south of Narvik:

Fat Dorniers [sic], having a clear run, were whirling like angry eagles low over the ground, almost touching the tree tops, and sweeping the grey thicket with murderous machine-gun fire. The fall of bombs was short and heavy, like that of ripe apples from an apple tree.

Once the fog lifted from Bardufoss, however, the British fighters picked up were they had left off a couple of days before. In 95 sorties they downed two German bombers, and destroyed two Do 26 flying boats on the water as they frantically attempted to unload
artillery pieces for the defence of Narvik.¹⁴⁴ The Fleet Air Arm also chimed in with Gladiators from *Glorious* shooting down a Heinkel He 115 floatplane. Two further bombers were claimed by anti-aircraft fire. While the air battle raged, Dietl’s situation grew increasingly more desperate. Heavily outnumbered, he could do little to prevent the Polish Highland Brigade attack on Ankenes, the French *Chasseurs Alpins* thrust along the southern shore of Rombaken Fiord, the Foreign Legion and Norwegian direct push eastwards into Narvik, and the British Navy’s landings on the waterfront.¹⁴⁵ Dietl was forced to abandon Narvik. Skilfully avoiding encirclement within the township, he guided his troops along the rail line leaving behind most of their heavy equipment.

With the destruction of further Luftwaffe aircraft at the hands of the Bardufoss fighters, it is remarkable that the first German raid on the airfield—a half-hearted one at that—did not occur until the next day; particularly, since the Luftwaffe’s attempt to counter the successes of Allied fighters by transferring increasing numbers of Bf 110s to support the bombers had failed. The twin-engined fighters had proved no match for the faster and more nimble Hurricanes, especially as many of the German aircraft were fitted with the so-called “Dachshund’s belly” (*Dackelbauch*), a long-range fuel tank which allowed them to reach Narvik with enough fuel for a 20 to 30 minute action, but also proved to be an additional handicap for the slower aircraft.¹⁴⁶ Although other attempts were made to utilise the Stukas’ intermediary field near Mosjøen for the Bf 110s, this could not be achieved prior to the Allied withdrawal. Consequently, given the German inability to provide adequate fighter protection in the face of climbing losses at RAF hands, it would appear, at least on the surface, that a concerted effort should have been made to shut down the Bardufoss airfield.

**Controversy over the Use of Air Power**

A divergence of opinion amongst the leading German commanders in Norway prevented attacks on Bardufoss from being carried out. It would appear that on the one hand, Falkenhorst and Stumpff advocated using air power primarily in direct support of Dietl’s forces, while on the other hand, Geisler and his Chief of Staff, *General der Flieger* Ulrich Kessler, and nearly all the officers leading the operations in the air, favoured the re-establishment of air superiority as the number one priority, followed by attacks on Allied shipping. That Stumpff, as head of *Luftflotte 5*, supported Falkenhorst’s position was seen by contemporary airmen in Norway as purely misguided loyalty, since Stumpff had been the latter’s junior in the *Reichwehr*. Kessler wrote scathingly after the war that Stumpff’s
“fawning” on Falkenhorst meant that the Luftwaffe effort was shifted more and more towards close air support of ground troops at Narvik and Feuerstein’s northward advance from Trondheim, neglecting far more important targets. “At a distance of 800 kilometres bombers were committed to bomb machine gun nests”, remarked Kessler, “and the twin-engine fighters to strafing attacks against enemy infantrymen they could hardly recognise.” In many respects, this argument holds a good deal of weight since there is little evidence to suggest that the aerial attacks on Allied forces converging on the town significantly impeded or even slowed their progress. Unlike the attacks on Allied ground forces in central Norway which had played a significant role in demoralising enemy troops and destroying their communication lines, the situation in northern Norway was very much different. For example, while attacks on the Namsos and Aandalsnes bridgeheads and advancing forces could be undertaken by a greater number of aircraft from nearly all the other airfields involved in the operation—Aalborg, Fornebu, and Sola—the attacks on Narvik could only be made from the cramped and under-supplied Vaernes field. On top of this, the northern region was subject to far worse weather in this period than had been the case over central Norway a month earlier and this made the sighting and targeting of enemy positions all the more difficult, even when sorties could be made. With the addition of British fighters into the equation, the Luftwaffe’s ability to greatly influence matters in northern Norway was gradually eroded. Therefore, it does appear that the air units should have been deployed more aggressively in the first instance against the threat to German aerial superiority—the Bardufoss airfield—and then against targets more easily seen and effectively attacked—the warships and transports in and around Narvik—rather than in close support of the Army.

Hard and fast rules of this nature, however, ignore the vagaries of any campaign and it does seem clear—despite Kessler’s over-simplification—that the employment of the Luftwaffe’s resources in support of Feuerstein’s northward thrust was justified. In short, Kessler’s argument ignored the fact that the most accurate aircraft in the Luftwaffe’s armoury, the Stuka, could not reach Narvik—let alone Bardufoss—for much of May and, therefore, was logically employed in support of Feuerstein’s ground forces. This not only hastened the withdrawal of the Allies from between Trondheim and Bødo but provided—albeit belatedly—the intermediary base near Mosjøen. Without the latter, the Sukas would never have been able to strike at Allied shipping in and around Narvik in the closing days of the campaign.
Moreover, in defence of Falkenhorst and Stumpff, it might also be noted that their emphasis on attacking the Allied ground forces pushing Dietl back towards Sweden was based on an appreciation of the larger picture and the Führer’s direct involvement. Both the commander of *Gruppe XXI* and *Luftflotte 5* were only too keenly aware that whilst a desperate defensive struggle was being waged by Dietl, back in Berlin a flurry of proposals were being put together in an effort to stave off defeat in northern Norway. With this planning going on behind the scenes, it is clear that the main objective was to make every effort to help Dietl hang on, even if this meant an over-concentration on ground targets, which, although not as rewarding, comparatively speaking, as warships, could make the difference between losing or holding on in time for a relief operation to be undertaken. Behind this planning was Hitler himself.

The Germans, right up until the Allies’ evacuation, believed that their combined enemies were going to make a final lunge and drive Dietl’s force out of the theatre for good. This would then facilitate the establishment of a permanent Allied base of operations in northern Norway, cutting the Reich off from its Swedish iron ore supplies routed through Narvik. (How the Germans expected the Allies to maintain this position with the bulk of the country in German control and so far from Britain was never elaborated.) In Hitler’s eyes, this was anathema since the whole *raison d’être* for *Weserübung* revolved around holding the iron ore port. On 30 May, clearly recovered from his earlier nervous breakdown and buoyed by the success achieved in the West, he instructed *Gruppe XXI* to notify Dietl that his force was to be supported by all possible means.\(^1\) Dietl’s task was to fight a defensive action for up to five or six days, by which time it was envisaged a relief operation could be undertaken. During this period, Stumpff’s air fleet was ordered to aid Dietl directly. Thus, the role of the Luftwaffe in the final couple of weeks was simply to help stave off defeat for the ground forces, whilst relief operations swung into action.

Numerous fanciful initiatives were examined and discarded in the rush to do something, anything, to prevent Dietl’s defeat and the loss of the port. A good many of these proposals never got beyond the planning stage, either through impracticality or because they were simply overtaken by events. One of these, the brain-child of the Führer himself, involved large numbers of gliders in the transportation of mountain troops to Narvik.\(^1\) Mountain troops were readied for the operation, and on 29 May, OKL assembled the glider force at Aalborg. Numerous delays followed, however, and Hitler was forced to reduce the number of gliders available to only six. In the end, even these were never used. Instead, on 4 June, planners decided on reinforcing Dietl with two parachute
battalions, totalling over 1,800 men. However, as with the Fuhrer's glider plan, this was overly optimistic given the shortage of troops trained for paratroops and the crowded state of Vaernes and its over-stretched resources. Consequently, paratroopers and mountain troops were dropped only in small numbers.

Another overly ambitious scheme, code-named Naumburg, was developed in the first few days of June by OKW. The operation would see a strong force of 6,000 men and a dozen tanks landed by the fast passenger liners Bremen and Europa 145 kilometres north of Narvik at Lyngen fiord. From here, this force would drive south to attack the enemy's rear while the Luftwaffe undertook a daring aerial assault of Bardufoss, from which it would subsequently operate in forays in support of the advancing ground units. OKW planned to execute the operation in the third week of June and to cover this sally north, proposed using the recently-repaired German warships damaged in the first days of Weserübung. Since the Allied evacuation was executed before this date, the mission was never undertaken. This was probably a good thing for the Luftwaffe as the earlier successful aerial assaults had been made under favourable conditions which did not exist at the RAF's well-defended Bardufoss airfield.

That German warships would be in the region to protect the passage of the liners was all part of the Navy's own operation planned to assist Group Narvik, code-named Juno. Under the reasonable, but false, impression that the war in Europe was drawing to a close, Raeder and the Naval Staff proposed an aggressive use of their warships in a bid to assure future support from Hitler for the Navy's development in the decades ahead. The main thrust of Juno was to be made by the battle-cruisers Scharnhorst and Gneisenau and the cruiser Hipper, supported by four of Germany's remaining destroyers. Originally, operations were to be undertaken "in the sea between Norway and Shetland" indirectly supporting Group Narvik by disrupting supply lines, yet with the deterioration of Dietl's position, and with Hitler's encouragement, these plans were gradually overturned in favour of giving direct relief to Dietl. Overriding concerns from Naval Group West and Fleet Command with Hitler's dictum "no great success without great effort", Raeder issued a directive on 29 May. "The first and principal task" ordered the Großeradmiral, was the penetration of Vaags fiord and the destruction of enemy warships and transports there, followed by the shelling of Harstad. If however, aerial reconnaissance indicated that penetration into Ofi Fiord, even as far as Narvik "would be more promising, then this would become the main task." The secondary objective involved protecting the Army supply route
running from Trondheim to Saltdal-Bodø-Mo, and was tied into the final proposal in support of Dietl, Operation *Bueffel*.

By the end of May, a hand-picked force of some 2,500 had been assembled near Sørfold. Under *Bueffel*, these were to make the last leg of the advance on Narvik along the coast from the Bodo region. The daunting terrain, plus the harsh weather, which fluctuated between rain, snow and fog, excluded not only the use of trucks, but even pack animals. Supplies could only be brought in by air drops and when the force arrived within sight of Narvik, some ten days later, further air drops would be made of ammunition and heavy weapons in preparation for an assault on the Allies positioned below Narvik.

Yet all these operations were dependent on one factor alone: Dietl holding out long enough for their planning and execution to be effective. Should he fail to do this, all the work and resources being committed to *Naumburg, Bueffel*, and *Juno* would be wasted and Narvik effectively lost. With this in mind, Falkenhorst and Stumpff’s decision to place the greater emphasis on close air support does not seem at all out of place. Although it did not make the ground targets any easier to hit at the time, the reason for attempting to do so is easier to understand. As the commander of Group Narvik wrote after the Allied evacuation:

> We had no artillery, so the Luftwaffe had to substitute as artillery for us. Low flying bombers again and again attacked the troop concentrations opposite us and the traffic on the roads, and thus to a certain degree replaced the artillery we lacked.\(^{156}\)

The Swedish, who were naturally watching the unfolding drama across their common border with Norway, concurred. On 5 June, in Stockholm’s major daily, *Aftonbladet*, it was noted that:

> The Luftwaffe has succeeded in keeping the positions of the Western Powers in and around Narvik under intensive fire. In Narvik itself they were able to destroy the post office building and thus telephone communications with the position of the Western Powers north of Narvik, among other things.\(^{157}\)

All of this goes some way to challenging what appeared in the eyes of Kessler to be a blatant misuse of air power. It should also be mentioned that during the 11 day period, 28 May to 7 June, adverse weather prevented the Luftwaffe from undertaking major bombing missions over Narvik on all except four of these days (28 and 29 May, and 2 and 7 June). Thus, given the small window of opportunity available for the bombers of *Luftflotte 5*, operations against Bardufoss may have been considered a luxury that at the time could be ill-afforded.
It may also be argued that, even had the Germans been able to destroy the RAF’s Bardufoss base, it would not have significantly altered the Luftwaffe’s ability to operate in the region anyway. Not only did inclement weather mitigate against effective air power support, but overall losses to RAF fighters were not crucial to the campaign in northern Norway, with at least one analysis showing that the 63 aircraft lost by the Luftflotte at the hands of Bardufoss’ Gladiators and Hurricanes were not at all decisive.\(^{158}\) British military historian Maurice Harvey points out that such was the scale of the Luftwaffe campaign compared to that of the RAF, that if the German losses were equally distributed, each Luftwaffe squadron would only have lost three of its reserve aircraft and overall, therefore, the number of sorties undertaken would not have diminished at all.\(^{159}\) As one RAF participant bemoaned when comparing their own position vis-a-vis the Luftwaffe:

As for us, the RAF, they were asking that from makeshift stations, supplied over laborious and faulty lines of communication, we should match ourselves against the greatly outnumbering Luftwaffe—which was operating from bases decently equipped . . . and big enough for twenty times the concentration of planes that we could make. With two squadrons at Bardufoss we had come to saturation point.\(^{160}\)

Bearing this in mind, and the need to keep Dietl’s force in action long enough for the relief plans to be implemented, plus the relatively few days available in which bombing sorties could be undertaken, the case for largely ignoring the Bardufoss airfield and focusing on ground support is not unreasonable.

This does not mean of course that attacks were not made on Bardufoss, but merely, when carried out, they were of a relatively minor nature compared to those made against Allied shipping and ground targets. Indeed, the first attack on 29 May was by three KG 26 Heinkels which were looking for an aircraft carrier in the vicinity and after failing to locate the vessel, diverted their attention to the RAF field. At only 600 metres, the bombers roared over Bardufoss. The base’s sleeping quarters suffered a direct hit from one aircraft, but the other two dropped their bombs clear of the field causing no damage.\(^{161}\) A scrambled Gladiator shot down one of the Heinkels over Narvik. A further 26 bombers on this day also made their way to Narvik, escorted by Bf 110s specifically to attack shipping in the port. Two of their number were shot down by patrolling Hurricanes. Bad weather stepped in again, and although Allied ground forces bore the brunt of limited Luftwaffe activity on 30 May, this was followed by a three day spell of bad weather that prevented any major missions being flown. By 2 June, conditions had improved sufficiently to allow a major operation by Luftflotte 5.
It was on this day that the “clash between Luftflotte and X Fliegerkorps” came to a head. Initially, it would appear that a large number of aircraft were dispatched early in the morning of 2 June for Bardufoss, much to the joy of most crews who were naturally looking for an opportunity to strike at the airfield that was responsible for the loss of a number of their fellows. Nevertheless, the Luftflotte determined that these aircraft should return for use, alongside other air units, in close air support of Dietl. This, of course, rankled with both aircrews and X Fliegerkorps’ hierarchy because not only were they deprived of the opportunity to hit back at the RAF at Bardufoss, they also lost a full eight hours in the process of wastefully dropping their bombs on the return flight to Vaernes, and being rearmed and refuelled before taking to the air again. Kessler resigned on the spot. In the end, Stumpff’s force made 47 bomber and dive-bomber sorties in attacks against shipping and Allied ground positions. While sweeps of the area were made by Bf 110s, continuous waves of bombers raided the Allied base and shipping at Harstad in and around Narvik. The centre of Narvik itself also came under bomber attack and the mostly wooden buildings became engulfed in flames. “At times the bombs fell in such rapid succession that it sounded like heavy automatic gun-fire” noted an English observer. Bomb began to fall”, recorded a Polish soldier, “Fires broke out, spreading from one wooden house to another, and in minutes Narvik was a roaring sea of flame.” In no time at all, the centre of the town had been gutted. Although the Vadsøe radio transmitting station at Kirkenes was attacked and the hut destroyed, no other notable successes were achieved at a total cost of four aircraft. Naturally, these losses and the Luftflotte’s counter-order demoralised some aircrews, while others were outraged that they had not been able to “get even with the British fighters”. In reality, despite Kessler’s understandable frustration, and Luftflotte 5’s bungling of the original mission plan, it is evident that Stumpff’s decision here and elsewhere was based on the need to help Dietl hang on until help appeared.

The action on 2 June, though, was the exception to the rule since over the period 3-6 June, poor weather once again grounded the bulk of the air fleet’s bombers, much to the consternation of all concerned. “Unfavorable flying weather (rain and snow storms) prevented a operation in support of the Group Narvik” ran the Luftwaffe’s daily situation report of 3 June. “The Luftwaffe cannot help us again today”, declared Dietl’s adjutant on 4 June, as “the weather remains terrible”. On top of this, the amount of supplies remaining to the mountain and naval troops fell to an almost negligible level due to the
mid-afternoon the distance between Trondheim and the fleet was considerable, the Luftwaffe sent a squadron each of Ju 88s and Heinkels, plus floatplanes, in search of the enemy at sea; their main target was the carrier, but aside from damaging a steamer 48 kilometres off Andoe Island, little else was achieved. Nevertheless, where the Luftwaffe had failed, the German Navy stepped in.

In accordance with Operation Juno, the German fleet departed Kiel on 4 June, steaming through the Great Belt then up the Norwegian coast towards their target area in and around Harstad and Narvik. Yet, by the time the vessels had closed in on northern Norway, it became apparent through aerial reports and B-Dienst intelligence that major elements of British naval forces in the area were now at sea rather than within the fiords.\textsuperscript{174} This led Admiral Wilhelm Marschall, the commander of the fleet, to conclude that:

It occurs to me that the noticeable westward movement may indicate a British evacuation of Norway, and that the westward-bound convoys will now offer valuable targets.\textsuperscript{175}

He therefore, somewhat controversially, abandoned the proposed operations within the fiords for the time being—preventing, he felt, his vessels from suffering the indignity of falling foul of Allied nets, mines, gun and torpedo batteries deployed at the entrance of the fiords—and informed the Naval Staff of his intention to attack the convoys.\textsuperscript{176} Although by the early hours of 8 June, the German fleet prowling these waters had only been able to pick off a few stragglers—a tanker, an escort trawler and the troopship Orama—bigger pickings were just around the corner in the form of the aircraft carrier Glorious.

Accompanied by only two destroyers, Glorious was spotted at 1645. Although the heavy cruiser Hipper and her destroyers were bound for Trondheim in support of the Germany Army’s northward Bueffel advance overland to Narvik, the remaining German battle-cruisers, Scharnhorst and Gneisenau, were more than capable of dispatching the vulnerable aircraft carrier. Despite Ultra indicating the movement of German vessels into the southern North Sea, and Harry Hinsley at Bletchley Park warning the British Operational Intelligence Centre that German warships might take “offensive action”, the Admiralty chose not to alert its forces at sea.\textsuperscript{177} Amazingly, given the proximity of Glorious to the Norwegian coast, Captain Guy D’Oyly-Hughes, the carrier’s skipper, had not put up any patrolling aircraft, nor were any ready for immediate action. The German battle-cruisers opened up at a range of 25,000 metres. The destroyers gallantly attempted to shroud the zigzagging Glorious with a smoke-screen and force off Scharnhorst and Gneisenau by using their torpedoes. The destroyer Ardent, though, was the first to succumb to the barrage of heavy calibre shells. In the meantime, Glorious’ deck had been
opened up "like a lid of a box" by the German battleships, observed Marschall. Once the ammunition and fuel stocks caught fire it was all over. "Slowly the giant began to turn on her side", ran a German report, pouring "out flames and smoke ... a moment later she sank." The remaining destroyer, *Acasta*, in her final desperate throw, struck *Scharnhorst* with a torpedo near her after turret, only to go down a short time later. Believing that the torpedo had been fired by a submarine in the area and with *Scharnhorst*’s speed reduced to 20 knots, Marschall called off further action and put into Trondheim. This decision, forced on Marschall by the limping *Scharnhorst*, and for which he would be vigorously attacked by Raeder, doubtless saved a troop convoy less than 160 kilometres distant as it made its way to Britain. Adding insult to injury, when *Gneisenau*, under Marschall’s replacement, *Vizeadmiral* Günther Lütjens, put to sea on 20 June to cover *Scharnhorst*’s return to Germany, she was also struck by a torpedo which actually was fired by a British submarine. Both *Scharnhorst* and *Gneisenau* would not be fit again for operations until December 1940.

**Victory**

On land that evening, the commander of Narvik Group, Dietl, proudly reported that Narvik was "again occupied by our troops." Not only did it appear that the enemy had completely evacuated northern Norway, but that the Norwegian King and government were at sea bound for Britain as well. At 1600 the next day, the commanding officer of the Norwegian Army in the Narvik region capitulated. The Germans occupied Bardufoss on 12 June and by the following day, Tromso was in German hands.

Although the German success in northern Norway had been brought about chiefly by the Allied decision to withdraw from the region, the Germans still had much to congratulate themselves about. Falkenhorst, the Commander-in-Chief of the German forces in Norway, waxed lyrical when congratulating Dietl and his men:

> On 9 April you were landed in Norway at the command of your Führer and from that day onward defended and held this area with exemplary tenacity under great privations and despite all the inclement weather against all the assaults of a greatly superior adversary. . . . Soldiers! The adversary has abandoned the conflict laid down his weapons and capitulated. You have remained victors and have won imperishable laurels.

Hitler likewise was exuberant in his 13 June 1940 order of the day to his victorious troops in Norway:

> I transmit the expressions of the proud admiration of the German people to the fighters of Narvik. All you who stood together there in the Far North,
soldiers of the Austrian mountains, crews of our warships, paratroops, combat fliers and transport pilots, will go down in history as the best representatives of the highest German soldiership. To Generalleutnant Dietl I express the thanks of the German people for the honourable page he has added to the book of German history.

Undoubtedly, the German achievement had been considerable and in terms of men and material lost, the ledger was remarkably even. Official figures released during the war showed German losses in the invasion of Denmark and Norway stood at 1,317 dead, 1,604 wounded and 2,375 missing; whilst Allied losses numbered some 1,896 British personnel, 530 French and Poles, and 1,335 Norwegians. Similarly, the naval losses on both sides were reasonably close. The Germans for their part lost one heavy and two light cruisers, ten destroyers, one torpedo-boat, one gunnery training ship, one R-boat and four U-boats. All up the German Navy lost, excluding auxiliary vessels, 18 ships totaling 88,604 tons prior to 22 May. Allied naval losses—which would unquestionably have been much greater but for the torpedo débâcle—included one aircraft carrier, two light cruisers, nine destroyers, six submarines and a large number of auxiliary vessels. On top of this, the British lost some 2,500 men at sea. Despite this parity in naval losses, the Germans were no position to absorb theirs as easily as the British and at the completion of the campaign, the Germans could only put one heavy cruiser, two light cruisers, and four destroyers to sea for immediate action.\(^{184}\)

The Luftwaffe rightly received a prominent place on the victors' rostrum. As Hitler declared in his famous speech of 19 July 1940:

The Luftwaffe, which was often the only real means of transport and communication in this enormous area, surpassed itself in every respect. The daring attacks on the enemy, on ships, and on disembarked troops can hardly be more highly praised than the tenacity and courage displayed by those transport pilots who, in spite of foul weather, kept flying in the Land of the Midnight Sun in order to land soldiers and throw down supplies, often in blinding snow-storms.\(^{185}\)

Luftwaffe commanders and their aircrews had proven themselves in the field of combat and Hitler was not only generous in his praise but acknowledged their achievements with promotions and awards. Gablenz was rewarded for his exceptional airlift effort with rapid promotion in following years to Generalmajor, while Geisler was awarded a Knights Cross for his sterling work with X Fliegerkorps and promoted to General die Flieger.\(^{186}\)

Of the two aggressive Fliegerführers, Harlinghausen tended to outshine Fuch for his hands-on approach to operational command, often flying reconnaissance missions in person over central Norway. Both Harlinghausen along with Hauptmann Pail-Werner Hozzel, the
commander of StG 1, received the Knight's Cross, for their unflagging pursuit of the Allies from north and south of Trondheim. For his determined efforts in bringing the communication network together and airfields up to speed, Milch was awarded the Knight's Cross also and with further success in the West, was one of three Luftwaffe officers to be promoted to Generalfeldmarschall. To appease Göring in the round of promotions and awards in the wake of Norway and the fall of France, Hitler created a new rank, Reichmarschall, and an award befitting Göring's massive ego, the Grand Cross of the Iron Cross (Großkreuz des Eisernen Kreuzes). To Hitler's credit, after Weserübung came to an end, he also "acknowledged and praised Jodl's achievement" and for his efforts here and in the West he promoted him to General der Artillerie.

Yet the overall success of the campaign and the round of back-slapping that followed blinded Göring and Hitler to a number of disturbing weaknesses evident in the Luftwaffe effort. The Luftwaffe’s inability to intervene in the First and Second Battles of Narvik and the extreme difficulties it faced when attempting to support Dietl’s far-flung mountain troops did not auger well for the future of air warfare in Norway and operations against Britain in the months and years ahead.
Chapter 5

Luftflotte 5’s Battle and Siege of Britain

Here is the most tragic chapter of all. When I think of it, gentlemen, it is enough to make me scream. I do not possess a single long-range bomber.
Hermann Göring, 13 September 1942

In terms of the broad goals of Hitler’s war directive of 1 March 1940, the Germans won the race for Norway, securing iron ore supplies from Sweden, and providing expanded bases for the Navy and Luftwaffe for future operations against Britain.1 Economically, although the campaign guaranteed Germany access to the rich iron ores of Sweden via Narvik, this proved to be less important than had been originally anticipated (and some historians later argued), since Germany had overrun the large Lorraine ore fields in its western Blitzkrieg.2 Despite this, Norway was destined to become part of Hitler’s New Order. Unlike France, which was to be milked heavily until the war ended, Norway would enter the German “Greater Economic Sphere” (Großraumwirtschaft).3 Germany planned to boost Norway’s agricultural production to decrease its dependence on food imports; use its fishing industry to alleviate the Third Reich’s protein deficiency; harness its large hydroelectrical power capacity in the production of aluminium, high-grade nitrogenous fertiliser, ferric-alloys, and zinc; and increase its mining capacity in other important metals such as copper, nickel, rutile and molybdenum.4 In addition to the procurement of minerals, Hitler, in the months and years ahead, laid out grandiose plans that included turning Norway into a major supplier of electricity for the Reich. “One day Norway will have to become an electrical centre of northern Europe” proclaimed Hitler one evening in August of 1941, “Then the Norwegians will have finally found a European mission to fulfil.”5 To this end, a German-Norwegian body was established in 1941 to oversee a ten million kilowatt increase in output, of which the greater part was to be transported by cable to the Continent.6

Norway, along with other occupied countries, was also drawn into a vast plan to utilise its work force for the Luftwaffe. Thus, considering the Luftwaffe’s potential air power presence in Norway, plans were also quickly drawn up for the exploitation of skilled labour in the Norwegian aviation industry. By early May, Hitler was already giving orders for the future direction of the relatively small Norwegian and Danish aviation industries and the part they would play in meeting Luftwaffe requirements. While the Führer stipulated that enlistment of the Danish armaments economy was to be undertaken on a “friendly
basis" (feundschaftlichster Grundlage), Norway on the other hand, due to ongoing resistance in early May, was to be considered an “enemy-territory” (Feindesland) in which the economy would be exploited. By late May, as the fight for Norway was drawing to a close, Göring was already drafting documents and sending them to Luftflotten and their respective Luftgau, including Luftflotte 5 and Luftgaukommando Norwegen, concerning the payments to gangs of skilled workers in the aviation industries lying outside the Reich. Generaloberst Ernst Udet, Chief of the Luftwaffe’s Technical Office, in a September 1940 report noted that the Luftwaffe was, with regards to Norway (now seen in a more favourable light with the cessation of hostilities), Denmark, the Netherlands and Belgium, to proceed with payments to the air industries concerned, according to an agreed exchange rate. In particular, immediate payment was to be arranged for Belgium and Norway through credit provided by the state banks. By 10 January 1941, Luftgaukommando Norwegen in Oslo had local engineers repairing Junkers aircraft at Kambo near Moss. By the end of the war, Norwegian skilled labour at over 50 locations up and down the country was involved in the repair, servicing and testing of aircraft engines, the production of duralumin sheets and aircraft spares for patching up damaged aircraft, work on both land and seaplanes, and the dismantling and salvaging of parts from wrecked aircraft.

Strategically, the centre piece of the Führer’s northern empire, though, would be a huge naval base at Trondheim which he described as a “super-Singapore” that, he proclaimed, would make Britain’s Far East namesake look like “child’s play” (“Kinderspiel”) in comparison. Hitler dreamed of building a “beautiful German city” on Trondheim Fiord (separate from the existing town) which, noted Albert Speer in August 1940, would become Germany’s northernmost cultural centre, boasting not only an opera house, library, theatre, and art gallery of German masters, but also a stadium and swimming pools. More importantly, Hitler’s architect recalled after the war, Trondheim would be Germany’s largest naval base; alongside “shipyards and docks a city of a quarter of a million Germans would be built and incorporated into the German Third Reich.” In a conference with Raeder on 11 July 1940, Hitler made clear his wish that Trondheim—linked directly to Germany by a magnificent four-lane Autobahn running via Lübeck and huge bridges crossing into Sweden—would form the fulcrum of the German Navy’s presence in northern waters. Not surprisingly, the plan received the full support of the Großadmiral because, as early Naval Staff considerations had demonstrated, the port offered the Navy numerous advantages in a war with Britain: it was sufficiently sheltered to prevent bombardment from the sea; the depth of water made enemy mining activities extremely difficult; several entry
and exit routes existed; its central position shortened the lines of communication with Germany and offered a shorter route into the Atlantic; the fiord contained many basins suitable for U-boats; and finally, the city already had a good deal of industrial and supply facilities suitable for supporting large-scale maritime operations. Further augmentation would occur with the construction of massive shipbuilding yards, capable of handling vessels of even the largest draft. In all, the proposed new naval facilities alone would be able to accommodate some 55,000 crew and worker families and enable the annual construction of one battleship and the servicing and repair of up to two battleships, six cruisers, and 24 U-boats at any one time. This massive project was worked on until 1943, when labour and material shortages curtailed Hitler’s grand plan. Overall, though, the basic premise behind the development of Trondheim was above all as a base from which to wage war against Britain, as had been envisaged as far back as Wegener’s First World War memoranda and as recently as March 1940 in the directive for Weserübung.

The Distant-Distant Blockade Thwarts Naval Plans

Yet while these future grandiose plans were being formulated for Trondheim, in reality Norway became less important in terms of actual naval operations than originally planned. In addition to the dearth of available surface vessels and warships to utilise Hitler’s latest acquisition, the Germans now occupied more favourably-sited naval bases on the French Atlantic coast. As already noted, due to the losses suffered during the invasion, Raeder could only call on one heavy cruiser, two light cruisers, and four destroyers, while the damaged Scharnhorst and Gneisenau would not be able to put to sea until late December 1940. The U-boat arm was no better off and on 1 July had only 15 U-boats at sea. Even as late as December 1941, Assman, in an otherwise upbeat assessment of the “Improvement of the Strategical Situation through the Norwegian Occupation” (Verbesserung der strategischen Lage durch Norwegenbesetzung), had to admit the Navy still lacked first-line vessels that would permit larger scale operations from Norway than had been undertaken to date. Therefore, although Germany had achieved Wegener’s prerequisites for a successful war against Britain with the acquisition of bases in Norway and France, it lacked enough vessels to push its greatly improved strategic position home in open waters. As Wegener twenty years earlier had realised, bases alone were of little use without the requisite forces available to utilise them. Moreover, what naval vessels were available could be better utilised in operations from Brest bases which provided an even shorter route into the Atlantic, cutting over 800 kilometres off the distance to the main U-boat operational area
west of the British Isles. On top of this, the usefulness of Norway was further reduced by the British occupation of Iceland.

In the First World War, German naval plans had been thwarted by the establishment of a distant blockade, shutting the navy within the North Sea by closing the Straits of Dover with the Channel Fleet, the northern gateway by Grand Fleet sweeps between Scotland and southern Norway and the establishment of minefields in both approaches. Although to a great degree the Second World War had seen the re-implementation of a similar distant blockade, the German occupation of Norway and the fall of France turned the tables on the British, threatening to outflank them to both the north and the south. "To keep Germany in the watery triangle of the German Bight", had been the British plan of naval warfare from 1914-1918, proclaimed Dr Karl Silex, editor of Deutsche Allgemeine Zeitung, in the paper’s 15 April 1940 edition, but now "Germany was out of its watery corner". Nevertheless, in many respects Germany's northern corner had really only been enlarged rather than truly liberated, since Britain, beaten to the prize of Norway and under the belief that Iceland would soon be gobbled up by Hitler as well, swooped on the latter in a pre-emptive occupation in May 1940.

Even before the invasion of Norway, Hitler had apparently been gazing further afield. As Walter Warlimont, the head of OKW's Operations Division, recalled after the war, the Führer was interested in occupying Iceland—along with plans for the Canary and Cape Verde Islands—because in "the first place, he wanted to prevent 'anyone else' from coming [sic] there; and, in the second place, he also wanted to use Iceland as an air base for the protection of our submarines operating in that area." Despite the Führer's pre-Weserübung interest in Iceland, it was not until it had fallen into Allied hands that he belatedly pushed for a German counter-invasion—dubbed Fall Ikarus—to capture the strategically important island. When Juno, the planned relief of Dietl by the converted liners Europa and Bremen, was no longer needed, Hitler leaped at the opportunity to utilise these and additional vessels in an invasion of Iceland. The German Naval Staff were aghast and dismayed when told by OKW of Hitler's plans on 12 June 1940. "An occupation of Iceland" argued the Naval Staff, "will not entail any improvement of the strategic situation at present, since the sea area around Iceland and between Iceland and the Faeroes is not controlled by German forces and utilisation of Iceland as a base for German forces is out of the question." The Luftwaffe concurred, and Göring could only support such an undertaking if it was "possible to create landing and taking off facilities for the fighters and
bombers on the island."²⁵ Of course, since these did not exist in 1940, the Luftwaffe was not about to lend its support to such a risky operation.²⁶

Yet Hitler pressed ahead, and on 20 June met with Raeder to thrash out *Ikarus.*²⁷ Although Raeder dutifully answered all the Führer’s concerns regarding preparations, he bluntly warned Hitler of the “impossibility of continuous resupply” and that *Ikarus* would demand the “full employment of the Navy.”²⁸ Not that Raeder did not favour an eventual occupation of the island, since it was agreed by all that the “British blockade in the Iceland area on a line with the Shetlands presents a continuous and unbearable threat to German safety . . . [which] must be broken once and for all.”²⁹ But what the *Großadmiral* and his staff also realised was that such an operation could not be realistically undertaken in the short to medium term. As Raeder pointed out after the conference:

> The task consists of transferring large numbers of men and quantities of material to remote waters for the most part controlled by the enemy. Here, in contrast to the northern Norwegian area, we are dealing with a sea area constantly occupied by enemy forces (cruisers and auxiliary cruisers) in the course of the enemy’s long-range blockade.³⁰

Against these considerable forces the Germans were only able to deploy a single heavy cruiser and, thanks to the First and Second Battles of Narvik, a mere four destroyers for escort duties. In addition to these overwhelming odds, the anticipated slow speed of the task force and lack of air cover would make just getting there an extremely risky if not foolhardy exercise. Moreover, should a successful landing take place it was concluded that “it will be impossible to keep our invasion forces supplied regularly.” In the end, *Fall Ikarus* died a natural death since it was clearly beyond the capabilities of the German Navy in the wake of *Weserübung,* and as Hitler himself became more and more preoccupied with *Seelöwe* and later *Barbarossa,* the Iceland project was quietly forgotten.³¹

Therefore, although the Germans had greatly improved their strategic position with the acquisition of a base in Norway, the gloss had been lost with the British occupation of Iceland. As Walther Hubatsch observed, this action meant the blockade line Scapa-Bergen “only needed to be turned through 90 degrees to establish a new blockade line” Shetlands-Iceland-Greenland.³² Wegener had foreseen that a German occupation of Norway would result in the British falling back to a “line Shetlands-Faeroes-Iceland," but in *Die Seestrategie des Weltkrieges* he expressed a belief that they would have great difficulty in maintaining such a blockade given the distances involved. Initially it did seem as though this would be the case, since at first the forces stationed at Iceland were relatively ineffective and could not prevent large German surface warships passing between Greenland
and Iceland into the Atlantic, where they set about raiding Allied convoys in late 1940 and early 1941. Nevertheless, even from a purely naval point of view, Wegener had been of the opinion that for the strategic offensive to be brought to a conclusion and perfected, Germany would have to “jump across the North Sea” with a view to “conquering a geographical position—for example the Shetlands—and taking root there.”\(^{33}\) In the final analysis, Norway itself was in his eyes really only a stepping stone to the Shetlands-Faeroes-Iceland island chain.\(^{34}\) In time, this was borne out as Iceland developed into an excellent escort base and in April 1941 a factor Wegener had not taken into account came into play: air power.\(^{35}\) The establishment of an air base on Iceland gradually closed the air cover gap on the Allied convoy route running between Newfoundland and Britain, further highlighting its strategic importance in the region. Therefore, despite German hopes, it became clear that the islands between Scotland and Greenland, not Norway alone, represented the key to controlling the north Atlantic and the naval exits from northern Europe into the Atlantic.\(^{36}\)

**Geo-strategy and German Air Power**

Initially, the pundits waxed lyrical about the advantages now open to Germany’s air units. Even before the battle was over, the *Deutsche Luftwacht* (The German Air Sentinel) magazine of the *Nationalsozialistisches Flieger-Korps* (National Socialist Fliers’ Corps) proclaimed that with “the occupation, Germany has won great possibilities for further attacking operations in the air.”\(^{37}\) “From the Norwegian west coast—which is far closer than the German Bight”, continued the magazine article, “the German Luftwaffe can carry out attacks against Britain and especially Scapa Flow”. While an operation from an airfield in Germany against Scapa covered nearly 980 kilometres in the outward flight, the same operation from Bergen would only involve 370 kilometres. Despite the occupation of the French coast, Norway was still seen as an important base from which to outflank Britain.

“There are no longer any islands”, proclaimed a German propaganda leaflet, which graphically showed that “the operational range of the Luftwaffe casts threatening shadows over Britain.”\(^{38}\) On the map, the operational range of Luftwaffe bombers was demonstrated by concentric circles marking the flying-time (*Flugzeit*) to targets within the British Isles from France, Belgium, Holland and Norway, which the author pointed out had been intended to “keep the war away from Britain’s shores” but were now “taking-off grounds from which the German Luftwaffe with its superior strength can attack Britain from all sides.” For example, an aircraft taking off from Sola could threaten not only Scapa Flow but the Scottish cities of Aberdeen and Edinburgh and England’s Newcastle in flights of no
Drohend liegen die Schatten des Wirkungsbereichs der deutschen Luftwaffe über England. — Frankreich, Belgien, Holland und Norwegen, die bestimmt waren, den Krieg von Englands Küsten fernzuhalten, umschließen heute als Startplätze der überlegenen deutschen Luftwaffe die britische Insel.

L'Angleterre sous l'ombre sinistre des ailes de l'Armée Aérienne du Reich. La France, la Belgique, la Hollande, la Norvège sont aujourd'hui les points de départ des avions allemands. The mighty German Air Force throws its greedy shadow over England - no longer safe behind France, Belgium, Holland and Norway.

10. A 1940 German leaflet declaring that “there are no islands any more!” since the operational range of the Luftwaffe has been greatly enhanced by the occupation of France, Belgium, Holland and Norway.

more than 80 minutes. This theme was also picked up in a popular 1941 Luftwaffe history, *Luftwaffe von Sieg zu Sieg (Luftwaffe from Victory to Victory)*, in which the author supported his favourable conclusions by quoting an OKW statement: “The campaign in Norway has broken the English blockade front. Greater Germany now holds a strategically important flanking position against England’s East Coast.”

Nevertheless, despite what propagandists grandly proclaimed and planners had initially hoped for, the advantages to be gained from possessing air bases in Norway were not as great as had been originally anticipated, and, in many ways, the benefits predicted to accrue from possessing Norway were never fully realised. Blinded by success in Norway and Western Europe, the Germans failed to appreciate the extent of the dilemma they now faced. Prior to the Scandinavian invasion, the directive for *Weserübung* had clearly laid out that an occupation of Norway would provide the “Luftwaffe with the expanded bases for operations against Britain.” Yet, as the Navy was discovering, merely possessing Norwegian bases did little to improve Luftwaffe operational possibilities if it lacked the wherewithal to exploit them. One of *Weserübung*’s leading commanders, Hans Geisler, had foreseen this situation as early as August 1939, when he pointed out that after taking into account the limitations of the He 111 and the Ju 88, and the lack of unit training for such an operation, “an air war against Britain in 1940 can only result in partial, though important, success, which could not have an effect, and threaten the British conduct of the war, before the second year of the war”; and even this could be achieved only “with the most rigorous concentration of all forces, and provided their operations could be sustained for a longer period leading to the breakdown of the enemy defence and gradual expansion of the German squadrons.”

Tragically for the Germans, this assessment was to prove all too accurate. Although in October 1939 naval planners recognised that a “a speedy and large scale expansion” had to be made of aircraft types suitable for warfare against Britain from Norway, the Luftwaffe did not have a single purpose-built long-range maritime aircraft or strategic bomber available for deployment in Norway. The consequences of this would be far-reaching. The failure to speed up the development and production of a long-range aircraft was important not only because it meant that *Luftflotte 5* had to withdraw from the Battle of Britain after only a single day of campaigning in August 1940, but also because Norway could never fulfil its role in supporting a U-boat-led siege of Britain as originally anticipated in the directive for *Weserübung*. In order to explain how this situation arose, much of the remainder of this chapter will be devoted to examining two major underlying, interrelated
factors: the lack of a coherent maritime strategy within the German armed forces and the presence of a pernicious inter-service rivalry that had developed between the Navy and Luftwaffe over the control and use of aircraft in naval warfare. Thereafter will follow a detailed discussion of the subsequent impact this had on both the air battle over Britain and the war at sea.

The Battle for Control of Naval Air Units

As soon as the National Socialists began their rearmament programme in 1933, the Navy had sought to establish its own independent air force, an air arm whose strength, training, organisation, and operational use would be determined by the Navy, for the Navy.\textsuperscript{43} This naturally flowed from the experience of the Imperial Navy during the First World War when, along with the Army, it had possessed its own air arm. Possession of this arm was jealously guarded, and when the Army suggested in 1915 that all air units be brought under a single command the Navy refused, arguing that it alone knew how best to develop and build naval aircraft and dirigibles, and train crews for operations at sea.\textsuperscript{44} Over the next 20 years, in contravention of the Treaty of Versailles the Navy, like the Army, worked quietly to reinvigorate its air arm. However, with the advent of the Third Reich a new path for German air power was proposed: an air force independent of both the Army and the Navy. In a reiteration of its 1915 arguments, the Navy attempted to thwart this development, but without success, and Hermann Göring was appointed by Hitler to establish the Luftwaffe. In this man, the Navy found a resourceful and determined opponent who believed that everything that flew should be under his command. Clearly, Raeder had his work cut out for him since, unlike himself, Hitler really liked his “Iron Man”, who was not only the second most powerful man in the Reich but also controlled the German economy.\textsuperscript{45}

Although Göring never understood either air power theory or grand strategy, he did understand ideas of patronage thoroughly. Consequently, he was only too willing to place less emphasis on naval matters simply because his master’s focus rested elsewhere. In doing so, he was merely reflecting a long-standing divergence of opinion over where Germany’s real interests lay: either over water in the Atlantic and Mediterranean in the west and south, as emphasised by the Navy, or on land in the east, as demanded by army officers.\textsuperscript{46} This, of course, would become apparent in 1940 with Hitler’s decision, supported by the Army, for an operation in the east rather than the Navy’s Mediterranean initiative which wanted to make North Africa, Gibraltar and the Atlantic islands the fulcrum of German strategy.\textsuperscript{47} Given the Führer’s hatred of Slavs and his quest for Caucasus oil, and Göring’s desire to
please Hitler with a view to increasing his own air empire, it is clear that Raeder’s demand for a naval air arm would lead him into an uphill battle.

Nevertheless, while Göring was determined to have all air units brought under his own command, Raeder passionately argued the case for control of his own air force in reconnaissance, attack and defence in the war at sea. The contemporary documents dealing with this struggle all reveal the Naval Staff belief that a single command for all naval forces, including air units, was the most effective means of conducting maritime warfare. They argued that the success of any aerial operation over the sea was dependent on those involved being trained and fully experienced under such flying conditions, and that since air power could carry out reconnaissance over a wide area and deliver swift defensive and offensive attacks it could no longer be considered a mere ancillary, but an integral part of naval warfare. As a leading Luftwaffe historian, Horst Boog, has pointed out, to Raeder “the aircraft was an integral sea-weapon like the mine, the torpedo and the artillery of men-of-war, and belonged to the fleet organically.” No doubt Göring would have retorted, by arguing that the emerging Luftwaffe was quite capable of becoming competent in operations over land and sea, making a separate air arm for the Navy both redundant and a wasteful duplication of resources which the Reich could ill afford.

Initially, the issue of control of aircraft to be used in naval operations was left in abeyance, although the Air Ministry did agree to pursue the development and production of suitable naval aircraft. Nevertheless, the divergence of opinion was always simmering just below the surface. It finally boiled over in the mid-1930s, just as the first cycle of aircraft production had been completed and increased numbers of trained aircrew were becoming available. The catalyst for the conflagration that followed was a letter signed by Kesselring, dated 21 December 1936, from Göring’s Air Ministry to Raeder. Bold to the point of rudeness, the letter declared that the Navy’s two land-based long-range reconnaissance squadrons and six land-based long-range fighter squadrons would be “taken over by the Luftwaffe.” In reply, the naval recipient reacted by scrawling in the margin: “It is not fit to do this!” However, Göring was of the opinion that long-range reconnaissance over the sea and against hostile coasts and harbours was “decidedly the task of the Luftwaffe.” “Due to the special needs which may arise in the course of war,” concluded Kesselring, the overall conduct “required the concentration of all fighting forces under the command of the Commander-in-Chief of the Luftwaffe.” Raeder, of course, was not about to “freely agree” to these proposals, as Kesselring had optimistically hoped, and a conference was held between the Air Ministry and the Navy to thrash out the problem.
Although the Navy prepared extensively for the meeting held on 11 March 1937, little was settled and at its conclusion a relaxed Göring stated rather off-handedly that he would “study the memorandum” which summarised Raeder’s arguments.

At this point, the OKW stepped forward, offering a compromise. On 31 March, it issued a directive establishing naval and air zones of operation:

The Coastal Defence District of the Navy is part of the theatre of war which borders the open sea. It includes territorial waters, fortified areas, naval garrisons and bases. In the Coastal Defence District the Commanding admiral is responsible for the defence against attacks from the sea as well as from the air.52

Yet the exact borders between the Navy’s “Defence District” and the Luftwaffe’s “Reich Air Defence District” were never clearly defined, and a further conference was organised for 11 May 1937, at which the Navy was determined that the Luftwaffe accept its 11 March memorandum:

This is vital for a successful conduct of the war at sea, command at sea can be only in one hand, that of the Commander in Chief, Navy. All arms which serve naval aims in time of war must be united under his command. During peace, Commander in Chief, Navy must therefore have far-reaching influence over the Naval Air Forces.53

As with the previous conferences, nothing concrete came of this exchange of views, and a protracted stand-off between the two services characterised the period from mid-1937 to early 1939. Meanwhile, alongside this disagreement over the actual control of forces to be used in maritime operations, considerable disagreement had arisen over the number of aircraft to be developed specifically for the naval effort. In 1935 the Navy put forward its first estimate, totalling 25 squadrons.54 By the following year, however, it became clear to the naval planners that 25 squadrons would be totally insufficient to meet their needs, especially if a war with Britain ever developed. Moreover, since it was likely that the Luftwaffe’s main area of operations would be continental rather than maritime, in a future European war they would be left without adequate air units to wage a war at sea. Thus between 1936 and 1938, just as it was becoming more and more likely that Germany would have to face off with Britain, the Navy pressed for a 62-squadron programme.55

The Luftwaffe and Göring’s Air Ministry were having none of this, and in a meeting of 24 November 1938 between the two services, Generalmajor Hans-Jurgen Stumpff, General Staff Officer of the Luftwaffe, pointed out that the projected Concentrated Aircraft Programme (Konzentriertes Flugzeugmuster-Programm) set for completion in the spring of
1942 called for the establishment of 58 bomber wings; of these, 13 bomber wings were earmarked for air-sea warfare. Stumpff went on to state that the simultaneous expansion of the Naval Air Force from 25 to 62 squadrons is impossible and unnecessary since the Luftwaffe is prepared to take over all offensive tasks and part of the reconnaissance duties with its 13 bomber wings detailed for air-sea warfare.

In accordance with this plan, the Luftwaffe intended to assign a large number of the four wings of Heinkel He 177 reconnaissance and bomber aircraft to the Navy. In other words, Raeder would get more aircraft for maritime operations than requested, but they would be Luftwaffe owned, crewed and commanded. The introduction of the He 177 into the equation was significant. It is not often realised that this four-engined aircraft was to be developed not only as a strategic bomber, but also as a land-based long-range reconnaissance aircraft suitable for maritime work, as indicated by one of its nicknames: the *Piratenflugzeuge* (pirate aircraft). The story of the failure to develop this aircraft, also known as the *Griffon*, was “destined to provide the most dismal chapter in the wartime record of the German aircraft industry”. It would bear directly on *Luftflotte 5*’s inability to strike effectively at Britain from Norway in 1940 and to operate in combination with naval forces over great distances in the years that followed.

The Failure to Develope the *Piratenflugzeuge*

Even before the Nazis came to power in 1933, German military planners had grappled with the problem of producing a four-engined strategic bomber with a long range, high altitude and heavy bomb-load capability. Contrary to the conclusions of various scholars, professional air strategists in Germany in the late 1920s and early 1930s were zealous followers of the credo of strategic bombing espoused by the influential Italian aviation theorist Giulio Douhet. Douhet passionately believed in the primacy of air power in determining future wars. He declared that the main burden of effort would be borne not by the Army and Navy as in past wars, but by the Air Force, which would wage war against the enemy’s sources of power, such as its air force, and industrial and population centres.

The publication of Douhet’s classic *Il Dominio Dell’ Aria* (Command of the Air) as *Luftherrschaft* in 1929, coupled with the appearance in 1933 of articles by the equally colourful American, Billy Mitchell, made a significant impression on air aviation strategists in Germany.

To create an aircraft which could meet the ideals of both theorists and strategists, required the development of powerful new engines, pressurised cabins, adequate high-
altitude bombing systems and aiming devices, and better long-range navigational equipment. Moreover, ease of serviceability and reliability for constant operational use were essential. Bearing in mind these considerable technical difficulties, Reichswehr planners concluded it would not be possible to produce such a bomber in large numbers until the late 1930s. Therefore, both Oberstleutnant Wilhelm Wimmer, of the Ordnance Office, and Major Hellmuth Felmy, of the Air Operations and Training Office, strongly pushed for long-term planning which would include strategic bombers in Germany’s future air force. With the easing of French watchfulness in the wake of the economic crisis of the late 1920s, German planners in the Reichswehr made tentative plans for the inclusion of a large strike force. In February 1932, Wimmer wrote to his section commander, commenting that he had:

not the least doubt that in the future, the only nations to have anything to say will be those that possess powerful air fleets around an airplane that can day or night strike fear in the hearts of their opponent’s population.

At the same time, Felmy put forward a blueprint for an 80 squadron-strong air force of 1,056 aircraft for 1938, including 42 bomber squadrons.

When the Nazis came to power, the reorganisation of Germany’s air force slightly delayed plans to develop a strategic bomber, although a number of factors encouraged the continuation of these earlier ideas in military circles from 1933 until the outbreak of war in 1939. These influential factors included memories of the stalemate which had developed in the Great War, the Dolchstoßtheorie (which had heightened the importance of the home front in modern warfare), and the vulnerable military and political position in which the fledgling Nazi state found itself in 1933. In light of these factors, the leaders of the new Reich began planning for an air force with which it could attack the morale of the enemy by striking at its very heart with strategic bombers. Not unlike their contemporaries in the RAF and USAAC, Luftwaffe planning personnel considered there was substantial potential for strategic bombing. For example, Dr Robert Knauss of the Air Ministry persuasively argued in 1933 for the establishment of a 400-strong bomber force with which to pursue any future war to the very core of the enemy’s resistance. He suggested that “the terrorisation of the main cities and industrial regions of the enemy by bombing would lead that much more quickly to a collapse of morale.”

Moreover, the War Ministry’s prestigious journal, the Militärwissenschaftliche Rundschau (Military Science Magazine), published a number of important articles dealing with the use of air power. Nearly all of these stressed the use of aircraft as a strategic weapon, and in one article on this subject a Major Bartz wrote that, considering the latest
generation of bombers, it was apparent that “already in today’s circumstances the bomber offensive would be as unstoppable as the flight of a shell.” In addition to these aspirations, the Luftwaffe was blessed with one of the Reichswehr’s most outstanding officers. Early in the Nazi period, Walter Weyrer was selected as Chief of the Air Command Office over another shining aspirant, Erich von Manstein. Weyrer, an intensely nationalistic man and a keen air strategist, fully supported the Führer’s plans for the rearmament of Germany and, by 1934, was a fervent advocate of an independent air arm spearheaded by a fleet of heavy strategic bombers. As an indication of the potential of these machines, Weyrer informally referred to them as Uralbombers.

The very day after Hitler took power, the Ordinance Office released the rewritten specification for the strategic bomber, and by May 1934 the heavy bomber had first priority in the Luftwaffe’s developmental programme. The timetable called for a mock-up by mid-1935, the production of prototypes by July 1936, a pre-production series by the winter of 1937, and full-scale production from 1938 onwards. Göring had been advised of these plans, but made no comment at the time. However, the self-important Göring flew into a rage when he viewed the mock-up of the Junkers Ju 89 four-engined bomber in early June 1935. He made it clear, that he, and he alone, had the authority to decide such matters, and that the Technical Office had gone beyond its brief in commissioning models from Junkers and Dornier. The reaction of General Werner von Blomberg, the War Minister, could not have been more different. Having seen the mock-up of the other contender for the Luftwaffe’s heavy bomber fleet, the Dornier Do 19, he asked Oberst Wilhelm Wimmer when it would be ready for production. In response to Wimmer’s answer, “about 1939 or 1940,” the War Minister paused for a moment, looked skywards and remarked prophetically, “That is about right” (Das kann richtig sein).

Unfortunately for the Germans, from this point on the development of their Uralbomber-Piratenflugzeuge was plagued by delays and technical difficulties. Although both prototypes were ready for their flight tests by late 1936, Luftwaffe planners were having second thoughts. Principally, these doubts centred on new specifications issued on 17 April 1936 which effectively killed the Dornier and Junker prototypes, because the range and speed required was nearly double that of models currently under consideration. Consequently, by October 1936 the pre-production run of the Do 19 and the Ju 89 was listed as “undetermined” and unlikely to be taken up in the near future. Although the rather underpowered and cumbersome Do 19 progressively appeared inadequate for the task at hand, the large Ju 89 showed much promise and the decision to cancel it would
fattally set back the German development of a four-engine bomber. The potential of the Ju 89 was ably demonstrated by its commercial derivative the Ju 90 which set a number of load and altitude records in 1938, and was one of the few aircraft available which could be swung into action in the support of Dietl’s mountain troops in Norway in 1940.

In many respects, though, the termination of both models reflected hard-nosed realism and changes within the Luftwaffe’s hierarchy. Sadly for the future of the Luftwaffe, Wever had been killed in an air accident on 3 June 1936. Albert Kesselring took up his position, while Wimmer was replaced by Ernest Udet. It would appear that these men decided that, in light of the inability of this first generation of bombers to meet the new specifications personally endorsed by Wever, it was not worthwhile to persevere with their development. Göring ordered work on these machines to be stopped on 27 July 1937—a decision that he himself would later have cause to regret.

When discussing the decision to cancel the first generation of long-range bombers and the subsequent shambolic attempt to pursue it later, many historians often parade a number of “enemies of the four-engined bomber”, such as Göring, Udet, and Milch in a regular rogues’ gallery, while lamenting the death of its die-hard supporter, Wever. While, as we shall see, there is some merit to this contention—especially where Göring and Udet are concerned—it should not be forgotten that the strategic thinking of the Luftwaffe was severely tempered by a number of geographical and resource-based factors. Such a view also plays down the Luftwaffe’s unique practical experience gained in the second half of the 1930s. First, Luftwaffe strategic planning was, on the whole, made on the basis of a war restricted to continental Europe, which accordingly failed to take into account the possibility of war with Britain until it was too late. Unlike their American and British counterparts, German military strategists were forced to accept the likelihood of a land battle immediately after war broke out. Situated in the middle of continental Europe, it was not considered realistic for the Germans solely to develop large numbers of strategic bombers, when Germany had to win the land war first if it was to pursue victory in a protracted conflict. It was pointless to talk of attacking strategic targets such as factories and population centres when the loss of Silesia and the Rhineland would prove catastrophic. If these initial land battles were lost, the result could be fatal. Both the British and the Americans, on the other hand, had the natural advantage of a sea barrier which allowed them to absorb any loss on mainland Europe without irrevocably losing the war. It is, therefore, of little surprise that German air policy in the inter-war period
reflected a more diversified approach than that of the exclusive "strategic dogma" of the RAF and USAAC.\textsuperscript{80}

Second, the German resource base prohibited the development of a massive strategic bomber fleet comparable to those assembled by the British and Americans during the war. The geo-political reality of Germany's continental position was coupled with a serious shortage of resources. Unlike Britain and, in particular, the United States, Germany possessed very limited reserves of natural resources. It was reliant on imports for nearly all of those raw materials vital to the development of a significant war economy.\textsuperscript{81} Although the Reich could have purchased a greater amount of raw materials in the post-depression era, a decline in its own exports brought about a shortage of foreign exchange in Germany. This was exacerbated by rising prices of industrial goods on the international market from the mid-1930s onwards. Even as late as May 1939, Milch was urgently warning Göring that the serious lack of iron, steel and other materials might lead to a reduction of overall aircraft production of up to 30 and 40 per cent.\textsuperscript{82} Shortages in iron, steel, aluminium and magnesium, coupled with a shortage of electrical power in the Reich, proved to be the Achilles' heel of the Führer's ambitious rearmament plans, and rightly or wrongly impinging on Göring's 1937 decision. The latter's rationale is neatly illustrated in a pre-war discussion on the four-engine bomber programme in which he enquired "how many twin-engined aircraft can we make for each four-engined one? To this, the reply was "About two and a half". "The Führer", concluded Göring, "does not ask me how big my bombers are, but how many there are."\textsuperscript{83} Nevertheless, despite the snappy answer (which has often been quoted) we shall see that Germany did, in fact, have enough materials to produce a genuine strategic bomber, although it appeared too late to affect the outcome of the war. Germany's main aviation problem was a failure to focus on the quantity production of effective designs, rather than shortage of materials.

Third, the experiences of the German Condor Legion in the Spanish Civil War spurred the development of close air support and dive-bombing. The Condor Legion experience was to play a significant long-term role in the declining ability of the Germans to develop and produce four-engined bombers, particularly in light of the abysmal results recorded in contemporary high altitude horizontal bombing tests. The best figures the training wing of the Luftwaffe could get with the Goerz-Visier 219 bomb-sight were only one to two per cent hit rates from 4,000 metres. In stark contrast to this, reports from the Condor Legion in Spain pointed to the far better results which could be achieved by dive-bombers and low-level attacks with high-speed bombers. In turn, this was confirmed by the
training wing of the Luftwaffe, which in low-level attacks scored a 12 to 25 per cent success rate, while its dive-bombers were consistently able to drop their bombs within 50 metres of the target. Due to these factors, Ernst Udet, Chief of the Reich Air Ministry’s Technical Office, was keen at every opportunity to ensure that Germany’s new generation of bombers, no matter how big they were could dive, although as he once lamely confessed to Heinkel he did not actually “understand production”, and even “less about big aeroplanes.” Consequently, in the run up to the war the Germans tended to limit themselves to medium and light bombers which offered the greatest degree of accuracy.

And the medium bomber most Germans had in mind as the “wonder” aircraft was the Ju 88. This was especially true during its early development when it seemed likely that this new twin-engine bomber would ably fulfil both tactical and strategic demands. Even as late as April 1939 Count Galeazzo Ciano, the Italian Foreign Minister, remembered Göring telling him that the Ju 88 has “long range that would be used to attack not only England herself, but also could branch out towards the West, to bombard the ships approaching Britain from the Atlantic.” Touted, among other things, as a long-range bomber able to sweep even beyond Ireland, the Ju 88 was over-sold from its inception. Moreover, thanks to a plethora of major and minor structural changes foisted upon the so-called “fast bomber” by Udet who demanded that it be capable of diving, the Ju 88 never lived up to pre-war expectations, with its limitations revealed in dramatic fashion during the Battle of Britain and the Blitz.

Notwithstanding these strong arguments suggesting that the Germans were neither in the position to, nor did not need to, create a massive fleet of heavy four-engined bombers (comparable to the British and American bomber fleets which attacked the Reich’s heartland from 1943 to 1944), the capacity and the need existed to develop a medium sized fleet of such aircraft. A force such as this, numbering some 200 to 300, would have proved useful not only in strategic bombing operations, but also in more important maritime work prior to 1942. That it was possible to produce such a force (contrary to pre-war misgivings) was demonstrated in the eventual production of some 1,146 He 177s during the war. Although nearly 85 per cent of these rolled off the production lines after the beginning of 1943, and consequently arrived too late to impact on the outcome of the Second World War, it does demonstrate that, given the will, Germany certainly had the means to enter the war prepared for an all-encompassing aerial campaign against Britain.
The Heinkel He 177

With the failure to develop fully the Do 19 and Ju 89 designs to meet the new 1936 specifications, the concept of a strategic bomber may well have been laid to rest but for growing fears of an Anglo-German confrontation. This created renewed interest in the heavy bomber among the General Staff in the last quarter of the 1930s. Although Göring had always hoped to avoid a war with the British, in February 1938 he cautiously advised one of his tactical commanders, Felmy, to draw up plans for an assault on Britain. After the Anschluß, Anglo-German relations worsened, and, consequently, the likelihood of a war with Britain became a “probability” rather than a mere “possibility.” Felmy pointed out that, unless the Germans secured bases from beyond their borders, such as in Holland and Belgium, their existing bombers would not be able to penetrate any further than 690 kilometres with a half-ton bomb load. Accordingly, Göring belatedly realised that the four-engined bombers ordered by Wever would be needed not only for strategic raids on Britain but for the 13 wings of Piratenflugzeuge earmarked for Germany’s maritime operations. However, as the Germans once again took up the development of a genuine heavy bomber, the growing influence of the dive-bomber concept began to severely curtail any significant progress.

In 1938, Udet approached the Ernst Heinkel Flugzeugwerke for a four-engined bomber capable of reaching Britain with a sizeable payload. The result was the potentially brilliant Siegfried Günter-designed He 177, which first flew in November 1939. The aircraft was designed to meet a required top speed of 600 kilometres per hour, a cruising speed of 500 kilometres per hour, a range of 3,600 kilometres with a two-ton load, and 6,000 kilometres with a one-ton load. Based on the results achieved with dive bombing and the need for precision bombing against shipping in the advent of a war with Britain, Udet, who had no technical expertise, demanded that the He 177 be able to perform 60-degree diving attacks rather than the medium-angle dive required by the Technical Office specifications. This amazing requirement came in the middle of its development and proved to be the undoing of the model, even more so than the promising Ju 88. Major structural changes to enable the He 177 to withstand the steep 60-degree dive and subsequent pull-out manoeuvre substantially increased the weight of the aircraft and resulted in a sharp decline in performance. Moreover, to reduce stress on the wings in the dive, a tandem-engine arrangement was devised. Günter originally wanted to employ two 2,000-hp engines, but, due to the lack of high-octane fuel in the Reich, he resorted to coupling two 1000-hp Daimler-Benz DB 601 units together. On its maiden flight on 19 November 1939, the
aircraft was only able to stay aloft for twelve minutes due to overheating. The propensity of the coupled He 177 engines to cook and catch fire was to be a recurring problem which would never be completely solved.

With Britain’s continued resistance following the German successes in Norway and France, Udet, who had been promoted to Inspector-General of the Luftwaffe and was responsible for aircraft procurement, attempted to rush the aircraft into production in October 1940. But as Ernst Heinkel recalled, this was not as easily achieved as the Luftwaffe’s inept Inspector-General hoped:

production had to be stopped until the plants had had time to retool for the large aircraft. All this was bound to take months. . . . The long-range, heavily-armed bomber seemed to be the only hope. Yet, it was precisely in this respect that catastrophe struck. Now produced for the first time in quantity and subject to thorough testing, the He 177 with its parallel-coupled engines did not measure up to the military requirements for which it had been designed. Many of them went down in flames when their engines caught fire, or crashed when their wings cracked for apparently inexplicable reasons. Thus, as suddenly as it had been released for production, the He 177 had to be withdrawn once more.96

The problems still being experienced well into the war are evident in an address given by the Reichsmarschall to representatives of the German aircraft industry on 13 September 1942. Though he had 36 He 177s in his inventory, by this time only two were ready for action, thanks to a spate of so-called fire and crash “epidemics”. He regaled the audience:

Now to deal with the long-range bombers. Here is the most tragic chapter of all. When I think of it, gentleman, it is enough to make me scream. I do not possess a single long-range bomber. When I think of all the lies I was told about the Ju 88! It was supposed to fly anywhere; it could fly for about an hour beyond Ireland. We calculated accurately how we were going to wipe out convoys everywhere. And then I had to count myself lucky if anything ever got beyond London. . . . It is with terrific envy that I regard the four-engined British and American aircraft. They are far, far in advance of us. The only thing which remains is the He 177. It is there but I dare not use it. . . . I was told that there would be two engines, built one behind the other, and then suddenly I find myself confronted by an abortion of an engine, made up of two engines welded together; no one can get at it and maintenance is made extremely difficult. This engine is put into the He 177 and then the exhaust flame damper is so badly arranged that the undercarriage has to be divided into two parts so as not to interfere with the arrangement of the exhaust pipes; and . . . such things mean that it may go up in flames at any moment. . . . Can anyone conceive how such an engine is to be serviced at the front? I do not think the plugs can be taken out without dismantling the entire engine.97

Heinkel responded to Göring’s attack by stating that his firm had nearly overcome the fire problem, but was still working on reinforcing the airframe to allow the bomber to be able to
dive. To which Göring curtly shot back: “It does not need to dive.” “I should make it quite clear what we expect of the He 177”, continued the exasperated Reichmarschall:

First of all, it should be able to carry torpedoes for long distances. It does not need to be able to dive to do that. ... In addition, it must be able to carry special bombs to attack shipping at great distances. And if we want to raid Swerdlowsk or somewhere like that, it must be able to fly at a suitable height. ... But do see to it that the thing is at last a really long-range bomber which can carry a decent load over long distances, and which is above all reliable and safe in every detail of construction (the engines particularly), so that it can be used to fly long distances over the sea to attack convoys at places where they are not very well protected.

In the end, though, despite Göring’s belated foot-stamping speech, it was too late, and the whole project remained continually dogged by technical difficulties well into 1942. Ironically, it was not until 1943, after the tide had well and truly turned against Germany and after Allied four-engined bombers began in earnest their strategic offensive against the Reich, that He 177 production shot up from only 166 machines in 1942 to 415 aircraft, and in 1944 peaked at 565.98 As impressive as this rate of production was given the shortages within the industry, it was simply too late, and with declining fuel stocks and crews, the He 177 programme was eventually brought to an end in October 1944 due to the demands of the Jäger-Notprogramm (Emergency Fighter Programme).99 Thus it had been impossible to fulfil either the hopes of the Navy or Göring for their own long-range bomber when it was most urgently required, in the first three years of the war.

Raeder’s Capitulation to Göring

Even as early as 1938, however, it had become clear that the Luftwaffe would not be able to assign anywhere near the 13 wings previously promised for minelaying, torpedo missions, and general naval duties. And those aircraft that could be made available for maritime tasks would not be placed under the command of the Navy. In the end, Raeder simply gave in. He may have been placated by the thought that at least some of the 13 wings could yet eventuate, or he may have decided to cut his losses since approval would soon be forthcoming for a huge battle fleet (the Z-Plan). Whatever the case, in a conference with the Luftwaffe on 27 January Raeder effectively ended any prospect of an independent Naval Air Force.100 In the final agreement between the two services, Göring got nearly everything he wanted: in a future war the operational area of the Luftwaffe would be Britain and sea areas in which naval forces were unable to operate; in naval actions, tactical intervention by the Luftwaffe would take place only when agreed on by both parties; and for minelaying,
the Luftwaffe had complete freedom of action beyond the reach of Raeder’s forces. Moreover, although the Naval Air Force was to be increased, control of these new units fell to the newly established General of the Luftwaffe with the Commander in Chief of the Navy, who was directly subordinate to Göring himself. In time of war, the former would be responsible for all air units deployed with the Navy. When war did arrive, the relationship of the Navy and the Luftwaffe can be summarised by the following partition of responsibility:

(a) The Luftwaffe was responsible for the procurement, training and equipment of all German air units; (b) The Navy was responsible for air operations at sea and in defence of coastal areas; (c) The Luftwaffe was to provide the Navy with sufficient air strength to carry out the objective under (b).

The fruits of Göring’s failure to make sufficient material preparations for a war that required operations over the sea against Britain began to appear only months before the Second World War broke out. In the second week of May 1939, Luftflotte 2 conducted a war-game designed to ascertain the Luftwaffe’s operational readiness, and a number of sobering conclusions were reached regarding the command, communications, and supply procedures in a war with Britain in 1942. In the resultant study, entitled “Operational Targets for the Luftwaffe in the Event of War against Britain in 1939”, it was observed that the air fleet lacked the requisite strength, training and aircraft of extended operational range to bring about a quick decision against Britain. Not only was the range of most of the aircraft in Luftflotte 2’s inventory insufficient to reach the ports of Britain’s west and southwestern coast, but aircrew were inexperienced in bad weather flying over such distances. The only success for the air fleet that could be expected was against the British aircraft industry, as damage inflicted here would be harder to mend in the short term and even small formations of bombers would be able to attack the widely dispersed targets. The definition of aircraft industry was soon enlarged to encompass all industry and supply facilities. This was approved by Göring on 19 June and would form the basis for the decision to attack the British air industry and airfields rather than coastal targets in 1940. Thus, even before the war had begun, the Luftwaffe was decidedly uneasy about its ability to lay siege to Britain anytime before 1942.

When war with Britain did arrive, the Luftwaffe and the Naval Air Force were unprepared. The latter, stripped of most of its strength, could only muster 14 coastal squadrons consisting mostly of Heinkel He 59 floatplanes and Dornier Do 18 flying boats. A number of types were undergoing trials, including the He 115 floatplane and
triple-engine BV 138 flying boat. Slow, poorly-armed, and confronted with the impossibility of escort fighters being employed to protect them, all these aircraft were slipping into obsolescence even before the war began. But with low priority assigned to research and development by the Germans in maritime aircraft, the crews and field commanders had little choice but to make the best of a bad situation. In all, around 130 seaplanes were available for action in early September, and not a single He 177 was to be seen. 108

In 1938, the Luftwaffe had promised 32 wings of bombers for maritime work. But bottlenecks in the armaments industry, the sheer impossibility of meeting the unrealistic goals of the Concentrated Programme, and the early arrival of war meant that in total the Luftwaffe had only 30 wings for all tasks, let alone what could be spared for deployment with the Navy. 109 Nevertheless, Göring—after years of ignoring the need for a strong force of bombers and reconnaissance aircraft with crew trained for operations over the sea and able to work in close co-operation with the Navy—ordered the formation of X Fliegerdivision on 3 September 1939 under the hand of Geisler. Consisting of four groups from KG 26 and KG 30, this newly-formed force totalled no more than 50 to 60 serviceable He 111s and ten to 15 serviceable Ju 88s. 110 This was not the 1,100 bombers originally promised, but it was a start.

Early Air and Sea Co-operation

In the months ahead, combined Navy-Luftwaffe actions were at best poor, and on occasions appallingly bad. Operations in October and November of 1939 and February 1940 clearly exposed the poor preparation and attention to the demands of air and sea co-operation. An attack on the British Home Fleet on 9 October, by Geisler’s force (recently upgraded from a Fliegerdivision to a Fliegerkorps, and augmented with aircraft of LG 1, totalling 127 He 111s, 21 Ju 88s, plus sundry naval air units) was singly unsuccessful. 111 Planned to coincide with operations by a potent German naval force against enemy shipping, “strong winds, poor visibility and low cloud” wreaked havoc on the vital interplay of “reconnaissance, shadowing, leading in and attack.” 112 Geisler was forced to confess that his crews were still poorly versed in flying in such miserable weather over the sea, and Göring prohibited future large scale undertakings in such “unfavourable weather”; the prospect of success simply was not proportional to the dangers involved. 113 Although two hits were claimed, six aircraft were lost, consisting of one Ju 88, three He 111s, one He 59 and a Do 18. 114 This was followed up by a poorly co-ordinated Luftwaffe-Navy air operation against a convoy off
Cromer on 21 October.\textsuperscript{115} The plan for the mission called for ten slower He 115s of K\-uFlGr 406 to attack first, when the defenders were less ready for such an assault, which would then be followed up by three Ju 88s. Unfortunately for the naval pilots, the Ju 88s arrived first, encountering defences of only “medium strength”, while the “the ten He 115s met with very heavy British defence which was forewarned.”\textsuperscript{116} The premature arrival of the Luftwaffe bombers had alerted the RAF who were at a high state of readiness by the time the lumbering He 115s arrived on the scene; they were quickly cut to pieces. Four of the He 115 floatplanes were shot down and another was heavily damaged. Operations in November were less costly in aircraft, but were similarly miserable in results.

The low point of inter-service relations came on 22 February 1940 when the Luftwaffe sank two German destroyers. These vessels, \textit{Maass} and \textit{Schultz}, were part of a six-strong destroyer force taking part in Operation \textit{Wiking}, designed to put an end to British fishing off Dogger Bank.\textsuperscript{117} However, on the same day, eight bombers of \textit{X Fliegerkorps} were dispatched to attack shipping between the Thames and the Firth of Forth, and it was these aircraft that between 1945 and 2000 spotted an armed vessel 30 kilometres off Tershelling Lightship.\textsuperscript{118} The bombers promptly attacked the vessel in the face of light flak and machine-gun fire, hitting it twice amidships. The crew later reported that the ship had caught fire and finally sunk.\textsuperscript{119} By 2030, the commander of the destroyers signalled that he had lost two of his warships and sought permission to abandon the mission. The inquiry into the débâcle found that the Luftwaffe had sunk \textit{Maass} and \textit{Schultz}, and although \textit{X Fliegerkorps} had informed the Navy of their upcoming sortie, the Naval Staff had not informed the Luftwaffe of their destroyer operations in time to brief the aircrews before they took off.\textsuperscript{120} Moreover, upon learning of the naval mission, \textit{X Fliegerkorps} failed to signal the first wave of bombers of the presence of German destroyers in the area, on the grounds that it would endanger their own operation.\textsuperscript{121} Raeder was livid, and declared:

Irrespective of the results of further inquiries by the special commission, I wish to state that the 1st Destroyer Flotilla should have been informed about the mission to be undertaken by KG 26, and \textit{X Fliegerkorps} should have been informed earlier about the destroyer operations. In future each arm must be adequately briefed on the others operations and this exchange of information is to take place well beforehand.\textsuperscript{122}

This costly loss of ships and lives graphically showed the dangers involved with two separate commands operating in the same area. This failure logically offered two practical solutions: either the remaining naval forces be placed under the operational control of the Luftwaffe through \textit{X Fliegerkorps}; or the air corps be placed under the direct control of the
Navy through Naval Group West (which controlled all naval operations along Western Europe’s coastline). But Raeder did not have a chance in his uneven struggle with Göring. 123 By the end of 1939 the Navy was left with only 15 squadrons, since Göring had seen fit to withdraw 12 multi-purpose squadrons from naval tactical control. 124 Not yet satisfied with control of air units, Göring grasped control of other weapons of value in the Navy’s armoury. Consequently, a bitter wrangle developed over control of mines and, later, torpedoes, both of which eventually came under Luftwaffe control in 1940. Control of the former weapon gave rise to the establishment of the second Luftwaffe force designated for naval operations, IX Fliegerdivision. 125 Under the command of Generalmajor Coeler, IX Fliegerdivision was created on 1 February 1940 and attached administratively to Luftflotte 2, while operationally it was directly controlled through Göring. In many ways, the achievements of his maritime units up until the end of the first quarter of 1940 could hardly be described as impressive. But Göring was able to gain a certain amount of solace that he was at least on the right track—and that the Luftwaffe and not the Navy was best suited to control maritime air operations—when reports of X Fliegerkorps’ sterling performance during the invasion of Norway in April came to hand.

The Significance of Weserübungen

As already noted, on the surface the campaign in Norway did support Göring’s belief that the Luftwaffe could carry out maritime operations and that Raeder’s concerns were therefore ill-founded. Certainly, the overall Luftwaffe effort had been successful and alongside the naval aircraft, played an influential role in the rapid victory in the southern parts of the country, while in the second phase it had demonstrated the influence of air superiority in the battlefield with the ejection of the Allies from central Norway. Yet with the rapid victory in Norway and the glory heaped upon him after the fall of France, Göring was in no mood to consider the fact that the Norwegian campaign, although successful, had revealed a number of weaknesses in the Luftwaffe; and that these directly reduced its ability to wage war at sea or over longer distances than those normally flown in support of the Army in continental campaigns. Even early on, it became clear that the distances involved were beyond the operational radius of nearly all Luftwaffe and naval aircraft, when the few available Condors had to be brought to carry out routine reconnaissance over Narvik. Indeed, X Fliegerkorps’ offer to send a whole bomber group on a one-way mission to attack British warships after the First Battle of Narvik on 10 April was a depressing admission of the inadequacy of either service’s aircraft for the task at hand. Moreover,
although a good number of Allied vessels had been sunk or badly damaged, it had not been a spectacular affirmation of "aircraft over warship" given the plethora of targets available. In fact, aerial recognition was so bad that enemy destroyers were often erroneously identified as battleships and on occasions, even aircraft carriers, demonstrating that X Fliegerkorps' aircrews were still learning the trade of maritime work.

With the ejection of the Allies from central Norway, the Germans had been able to secure Trondheim's Vaernes airfield. Nevertheless, even with this forward field, the Ju 88s and He 111s were not really suited to this type of long-range anti-shipping mission. Likewise, the Bf 110 was equally unsuited to escorting the bombers on their way to Narvik, with its cumbersome handling abilities further eroded by the fitting of an external fuel tank for long distance flight. What Göring failed to ask himself was: "If my premier maritime air units are having difficulties of this sort over Norway, how suited are they to operations over Britain, where instead of facing merely a couple of hastily thrown together fighter squadrons, they would meet the full weight not only of Fighter Command's considerable fire-power, but a carefully-designed defensive system?" The failure to recognise the problem and the cumulative effect of years of neglect, indifference and inter-service infighting over developing a genuine long-range bomber suitable for maritime and strategic bombing operations would be tragically exposed by Luftflotte 5's ill-fated first and last major raid in the Battle of Britain on 15 August 1940.

Air War over Britain

As both Weserübung and the battle for France drew to a close in June 1940, the victorious Führer pondered two possible courses of action. He could arrange a compromise peace with Britain, or instruct his staff to make preparations for an invasion of the British Isles, should these peace overtures fail. Flush from his French success, Hitler felt confident that Britain would accept a peace that allowed it to retain its empire and participate in the sharing out of French colonial properties. Britain, however, rejected both Germany's clandestine and public offers. Therefore, on 2 July, Hitler made it known that a "landing in England is possible."126 Within two weeks he issued Directive No. 16, "Preparations for the Invasion of England", code-named Operation Seelöwe (Sealion). In this directive Hitler stated that:

As England, in spite of the hopelessness of her military position, has so far shown herself unwilling to come to any compromise, I have therefore decided to begin preparations for, and if necessary to carry out an invasion of England. 127
This invasion would take place "on a broad front extending approximately from Ramsgate" to Lyme Regis, some 430 kilometres in length. Ninety thousand sea-borne troops would assault the British coastal defences on the first day and within three days a beach-head of up to 260,000 men was envisaged. This would be followed by second and third waves containing armoured and infantry divisions respectively. In all, the Germans planned to disembark thirty-one divisions within four weeks, and the defeat of Britain would be all but completed shortly thereafter.

The most important role was assigned to the Luftwaffe. Directive No. 16 stated that to make a landing possible, "The British Air Force must be eliminated to such an extent that it will be incapable of putting up any opposition to a German crossing." This harked back to Hitler's order of 2 July, which stipulated to the planners of Operation Seelöwe "that a landing in England is possible, providing that air superiority can be attained." The Luftwaffe's leadership planned to strike British airfields, aircraft factories and auxiliary facilities in south-east England, and thereby eventually wear the RAF down until aerial superiority had been achieved. Although Germany's air force leaders realised that their operation was seen only as the preliminary part of Seelöwe, unofficially they "hoped that air action alone would force Britain to sue for peace."

The Luftwaffe's preparatory operations for Seelöwe were relatively limited. On 10 July, while the Germans were still assembling aircraft and preparing airfield facilities in northwest France, the Luftwaffe engaged in probing assaults on British ports and convoys. This resulted in the loss of some 150 British fighters and 286 German aircraft. By 5 August, the German Air Staff had prepared plans for the air assault proper. Generalfeldmarschall Albert Kesselring's Luftflotte 2 and Generalfeldmarschall Hugo Sperrle's Luftflotte 3 were assigned targets in south-west England, while Stumpff's smaller Luftflotte 5 would assault targets further north from its bases in Norway.

Indeed, Luftflotte 5's sphere of operations was markedly smaller than those allotted to the Luftflotten based in France. It encompassed a rather diminutive area bordered by the Humber estuary in the south, the Scottish border in the north and stretching inland almost reaching the city of Lancaster on the west coast. The limited zone of operations given to Stumpff's air fleet was indicative of its size and the fact that most of the Luftwaffe's important targets lay further south, beyond the reach of German aircraft based in Norway. Although it was ostensibly directed to make attacks on the enemy's air force and air industries, Göring revealed in a speech of 21 August that Luftflotte 5 had also been deployed to "tie up enemy fighter units on central England's east coast."
Since the conclusion of the Norwegian campaign, *Luftflotte 5* had seen a large portion of its bomber strike force siphoned off to the southern air fleets. Consequently, by the beginning of August, Stumpff's air fleet was decidedly the poor relation of its two French cousins. Gone were the glory days of May when *Luftflotte 5* boasted over 700 combat aircraft. Now a shadow of its former self, the air fleet was reduced to four bomber groups belonging to *X Fliegerkorps*' KG 26 and KG 30. These Heinkel and Ju 88 bombers were augmented by limited numbers of ZG 76's Bf 110s and JG 77's Me 109s; the latter, of course, were only capable of defensive operations over Norway by reason of their limited range.\(^{136}\) For coastal reconnaissance and mine-laying operations, *Luftlotte 5* still retained KuFlGGr 506 and its He 115 floatplanes, and for long-range reconnaissance the He 111s and Ju 88s of a handful of so-called long-range reconnaissance squadrons.\(^{137}\) Of the aircraft, Stumpff could bring to bear directly on Britain not more than 175 (138 He 111s and Ju 88s, and 37 Bf 110s), compared to the 1,232 aircraft *Luftlotte 2* and *3* were able to field.\(^{138}\)

Clearly, though, in total the Germans were able to deploy a significant aerial armada for the up-coming battle. For example, the Luftwaffe had about 2,350 serviceable front-line aircraft of all types, and the RAF 1,150.\(^{139}\) The difference in fighter strength was not so marked, since the British had nearly 690 serviceable fighters compared to the Germans' 960.

Notwithstanding a number of postponements, *Adlertag* (Eagle Day) was eventually set for 13 August 1940. The ensuing battle itself went through four main stages.\(^{140}\) Between 13 August and 23 August, the Luftwaffe attacked British airfields and radar stations in south-east England. From 24 August to 6 September, the Luftwaffe went further afield to RAF and other military facilities around London, and, towards the end of this phase, to British aircraft factories and related industries. On 7 September, in an attempt to bring the RAF to battle more directly, the Luftwaffe began making day and night raids on targets in London, up until 19 September. From this point on, the Germans switched to indiscriminate night raids on London in order to bring about conditions suitable for *Seelowhe*. Although the Blitz continued into the spring of 1941, it did not seriously affect Britain's industry or its will to fight. Within these four phases of the conflict the part played by *Luftflotte 5* role seemed so embarrassingly brief, that hitherto it has warranted little more than a cursory paragraph or two in many histories of the Battle of Britain. However, given the serious deficiencies it exposed and the importance of these to future aerial activity from Norway it is deserving of greater consideration.
Luftflotte 5's contribution to the Battle of Britain

Stumpff's air fleet was to swing into action soon after the two larger Luftflotten had dealt the first blow on 13 August. This they did two days later when all three Luftflotten converged on Britain in the largest raid of the battle so far. Their task: to attack British airfields and radar along a wide front, and thereby bring as many RAF aircraft to battle as possible. Of the nearly 2,000 German aircraft taking part, Luftflotte 5 contributed only 154. These were divided into two attacking groups—one based in Sola and the other at the Danish field of Aalborg.141

The more southern thrust from Aalborg consisted of 50 of KG 30’s Ju 88s which were to hit the airfield at Driffield, East Yorkshire. The northern Sola thrust was composed of 63 of KG 30 He 111s whose primary targets were the Dishforth and Linton-on-Ouse airfields, with Newcastle, Sunderland and Middlesbrough as secondary objectives. Escorting the Heinkels were 21 Bf 110s of Sola’s ZG 76—the twin-engine fighter wing which had won glory for itself in the capture of the Oslo airfield on the opening day of Weserübung. Reaching their targets would, however, be no easy matter given the distances involved. For many of KG 30, KG 26, and ZG 76 the operation brought back unpleasant memories of the extremely difficult conditions they had only recently experienced during the Norwegian campaign in flights from Sola and Trondheim in support of Dietl’s far-flung forces in northern Norway. The outward and return flights of both prongs of the attack measured roughly 1,500 kilometres alone, to which 20 per cent had to be added to the flying time to cover take off and landing, navigational errors and the all important attack—over 1,800 kilometres in all.142 This put the bombers at the extreme end of their operational range and forced a reduction in bomb loads of the Heinkels to only 1,360 kilograms per aircraft, including incendiaries and 500 and 250 kilogram high explosives.143 In a repeat of their operations in support of the bombers flying over Narvik in June, the escorting Bf 110s were fitted with the Dackelbauch, a belly-drop fuel tank holding over 800 litres of additional fuel to increase the fighter’s operational range.144 The Ju 88s were given no true fighter escort. This is perhaps due to their higher speed compared to the lumbering Heinkel and the fact that some of these were the Ju 88C fighter-bomber. These aircraft were to provide a degree of cover for the other Ju 88s and as such did not carry any bombs.

Nevertheless, the raid was extremely risky and to a great degree was based on the erroneous belief that previous assaults on the southern England by Luftflotten 2 and 3 had led to a transfer of the RAF’s northern-based fighters to the south.145 The inspiration for the northern raid seems to have originated with Oberst Josef Schmidt, Göring’s Chief of
Intelligence. Schmidt, though, had not reckoned on the stubbornness of Air Chief Marshal Sir Hugh Dowding, Commander-in-Chief of Britain’s Fighter Command, who refused demands by the southern 11 and 12 Groups for a general strengthening of their own units with aircraft from the quiet northern 13 Group.\textsuperscript{146} Just as he had wisely refused to send more fighter squadrons into the black hole of the French campaign months earlier, Dowding now refused to stop the rotation of tired units to the relatively peaceful north.\textsuperscript{147} Consequently, just when Stumpff’s aircraft were about to raid northern England, 13 Group boasted six fighter squadrons, some of which were made up of seasoned pilots. Yet even if Dowding had seen fit to send some of 13 Group’s fighters to southern Groups, leaving a smaller number of squadrons to meet the incoming aircraft of Luftflotte 5, these would still have presented a considerable threat to the German bombers and twin-engine fighters as illustrated in late May and early June 1940 over Narvik, when a handful of Gladiators and Hurricanes had claimed to have successfully shot down 63 German aircraft in a very short space of time. Clearly the lesson from Norway, that German medium bombers and twin-engined fighters operating at the edge of operational range were easy pickings for nimble enemy fighters, had not been learnt.

On top of this, the Luftwaffe was to be taught another lesson, because the British on their home soil had the invaluable benefit of radar. The advantage of radar—never fully appreciated by the Germans at the time—was intensified in northern England simply because the distances involved meant that aircraft flying from Norway and northern Denmark were often picked up well off the English coastline, giving the defenders ample time in which to get their aircraft airborne and into an attacking position from which to intercept the intruders. Moreover, if the Germans had hoped that the northern radar system would be less vigilant than its southern counterparts they were sorely mistaken; an important convoy was sailing north from Hull around midday on 15 August and all radar stations in the region had been ordered to maintain a high degree of alertness throughout its voyage.\textsuperscript{148} The combination of these two factors—ample numbers of single-engine fighters directed by alert radar operators—was to exact a terrible toll on Luftflotte 5’s crews and aircraft.

The Heinkel bombers of KG 26 left a wind-swept Sola at 1000 hours (GMT). These were followed in quick succession by the 21 Bf 110s. Although reasonably confident that the northern England defences presented less of a threat than those in the south, Luftwaffe planners did attempt to deceive and avoid enemy interception as much as possible by putting up a decoy flight of 20 He 115 floatplanes. And the leading Bf 110, piloted by
Hauptmann Werner Restemeyer, was fitted with special wireless monitoring equipment, operated by Hauptmann Hartwich, X Fliegerkorps’ chief signals officer, designed to intercept the enemy’s ground control communications. This latter attempt to side-step defending fighters was to fail completely, while the floatplane feint actually worked against German success as KG 26’s navigation was awry. As the 20 floatplanes (having taken to the air 30 minutes before the main force) made for the Firth of Forth well north of the bomber targets at Dishforth and Linton-upon-Ouse, a three degree error in the flight path of the bomber force and its escorting fighters brought them towards the English coast 125 kilometres off course, and almost to the point where the floatplanes would have made landfall.

“Thanks to this error”, noted Kapitän Arno Kleyenstüber, a Staff Officer at X Fliegerkorps headquarters, “the mock attack achieved the opposite of what we intended. The British fighter defence force was not only alerted in good time, but made contact with the genuine attacking force.”

British radar operators picked up the floatplanes—which they accurately estimated to be 20 strong—at just after 1200 hours and at 1215, 72 Squadron Spitfires at Acklington were scrambled to patrol over the field. By this time, the Heinkel crews had become aware of their navigational error and the aircraft were swung south, while the floatplanes had already turned back 65 kilometres off the Scottish coast. Over the following ten minutes, it became apparent to the British that there were now more than the 20 to 30 aircraft originally estimated by radar operators and two flights of Hurricanes from 605 Squadron were scrambled from Drem to join those from 607 already on course to intercept the intruders. Spitfires of 79 and 41 Squadrons were also put into the air, although only the former was directly situated along the route flown by the German aircraft. The Spitfires were first to spot the German attackers, which were cruising at approximately 4,270 metres off the Farne Islands. To their surprise, the incoming Germans numbered not 30 but nearly 100 strong. With a 910 metre height advantage, the Spitfires dove out of the sun upon the unsuspecting fighters and bombers of X Fliegerkorps.

In minutes the first two German Bf 110s had been shot down in flames, one of which was Restemeyer’s aircraft. The bombers were scattered and the RAF fighters forced the twin-engined fighters into defensive circles. One of the fighter pilots, Oberleutnant Hans Ketting described his own experience:

I heard Obergefreiter Volk, my radio-operator and rear-gunner, fire his machine guns and on looking back I stared into the flaming guns of four Spitfires in splendid formation. The plane was hit—not severely, but the right-hand motor was dead. . . . I tried to reach the protection of the bombers which were overhead, but without success . . . as Spitfires came in
for the kill, I sent out my Mayday. This time the RAF fighter got the left-hand motor and knocked out the rear gunner (who was wounded in the knee) and the front screen. The bullets missed my head by inches.\textsuperscript{152}

Kettling survived the crash landing, but others of ZG 76 were less fortunate. The Bf 110s were unable to fend off the British single-engined fighters without heavy losses and escaped only after losing seven aircraft—a third of their force. Despite claiming to have shot down 11 enemy Spitfires, in reality the Bf 110s failed to destroy a single RAF fighter in the mêlée. As for the bombers, while the Luftwaffe after-action report stated that “because of strong fighter defence and deep clouds success was not individually observed”, and the 8th Abteilung’s 1943 history of the Battle of Britain confidently stated that “extensive fires were observed in the hangars at Whitby airfield”, the actual results were less than spectacular.\textsuperscript{153} It does appear that a good number of the Heinkels simply jettisoned their bombs harmlessly into coastal waters and turned tail for Norway, but not before eight of their number were shot down. None of those that pressed ahead along the coast successfully reached the designated targets, but some sprinkled their bombs over County Durham. By 1335, the failed operation was over and the surviving bombers limped back over the North Sea.

Further south, the 50 Ju 88s made landfall at Flamborough Head, and having been picked up by radar were engaged by Spitfires of 616 Squadron and Hurricanes of 73 Squadron, which had been scrambled at 1307. The ensuing air battle forced the German formation to disperse into eight smaller formations. Of these, some bombed houses and an ammunition dump in Bridlington, while the bulk of the remaining aircraft flew on to Driffield, a 4 Group Bomber Station, where they successfully destroyed ten Whitleys and damaged four hangars in one of the day’s most successful raids.\textsuperscript{154} Nevertheless, heavy anti-aircraft fire at the field brought down one of the bombers, and, added to those destroyed by the fighters, this meant KG 30 had lost six of its Ju 88s; that is, a near a ten per cent loss rate.\textsuperscript{155}

The losses to Luftflotte 5 were unacceptably high and of its total complement of 154 aircraft, Stumpff’s air fleet had lost 20 planes with many more damaged. Although the OKL war diary as late as 6 September indicated that Luftflotte 5 would again be used to “tie down sizeable defensive forces” while attacking the “enemy air industry”, suggestions were being made to have X Fliegerkorps assigned to Kesselring’s Luftflotte 2 at the end of August. In the first week of September, units of the air corps were transferred.\textsuperscript{156} The campaign proper had only just begun and Luftflotte 5 was already out of the action. Indeed,
15 August proved to be the first and last time Stumpff’s aircraft would sally forth in any significant daylight raid on Britain.\textsuperscript{157} As Dowding astutely noted after the raid:

The sustained resistance which [the Luftwaffe] was meeting in south-east England probably led them to believe that fighter squadrons had been withdrawn, wholly or in part, from the north in order to meet the attack. The contrary was soon apparent, and the bombers received such a drubbing that the experiment was not repeated.\textsuperscript{158}

Within weeks of the raid the northern air fleet was stripped of its most potent strike force, the bombers of KG 26 and 30 and some of the Me 110s.\textsuperscript{159} Having shown that these aircraft lacked the range to operate effectively over Britain from Norway, the Luftwaffe had little choice but to transfer them to Luftflotte 2.

In many ways, Luftflotte 5’s 15 August disaster revealed glaring weaknesses in German air power ability, first hinted at during Weserübung, that would not only doom its attempt to achieve aerial superiority in the skies above England, but also Germany’s “siege of Britain”. Principally, the Germans had embarked on a war against Britain without a long-range four-engine aircraft capable of either bombing at high altitudes with heavy payloads or undertaking reconnaissance over great distances in support of the U-boat war. To show how effective this may have been, one needs to consider what a four-engine bomber flying from Norway and France could have achieved in raids on British airfields and industry and, more importantly, in implementing a “siege of Britain.”

Four-engine Bombers and the War against Britain

It can be argued that the turning point with regard to the likelihood of an invasion of Britain was 15 September, when the Luftwaffe launched an even bigger raid than its 15 August predecessor and lost 65 aircraft (some press claims at the time stated 185) as against only 26 RAF machines.\textsuperscript{160} From this point on, the threat of sea-borne invasion began to recede.

It was clear that the Germans had not achieved the air supremacy they needed to launch Seelöwe. Therefore, by early September, discussions regarding the invasion began to reflect the likelihood of it being postponed until the following year. For example, in an order of 1 September, Keitel revealed that preparations for Operation Seelöwe could not be completed before the 15th and that “the Führer will decide whether the invasion will take place this year or not, his decision will depend largely on the outcome of the air offensive.”\textsuperscript{161} On 12 October, Hitler made the inevitable order to call off the invasion for 1940, and “until the Spring [of 1941], preparations for Seelöwe shall be continued solely for the purpose of
maintaining political and military pressure on England." In the autumn of 1940, Hitler turned his attention eastward to the Soviet Union.

Of the four main phases of the Battle of Britain it is the second phase—from 24 August until 6 September 1940—that this study will use as a framework from which to discuss the significance of the German failure to produce sufficient numbers of four-engined bombers. It was arguably in this period that the Luftwaffe came closest to achieving air superiority over the RAF. This is ably demonstrated by an examination of Fighter Command’s crisis in aircraft supply. Although by 2 September the daily losses for each side were about equal, the RAF’s position was worse due to its rapidly falling stocks of aircraft. On 10 August, the RAF had 129 Spitfires and 160 Hurricanes available to replace the 64 lost in battle or accident over the preceding week. Nevertheless, in the following four-week period losses reached an average of 240 aircraft per week, reaching a peak in the last two weeks when 297 Hurricanes and 209 Spitfires were destroyed in combat or were written off because of pilot error. On 7 September, therefore, only 39 Spitfires and 86 Hurricanes were available for immediate issue: Fighter Command had reached a crisis in supply. Therefore, as American historian Robin Higham has noted, if “the Germans continued their attacks at the time, they would have run Fighter Command out of aircraft.” Yet as serious as this was, the loss of experienced pilots was far graver. Not only had losses in aircraft been 200 in excess of the number produced in the final two weeks of August, but the loss of 300 pilots over the whole month left a deficit over trained replacements of 40. Of the original 1,000 pilots who had started the war with the RAF, barely a quarter were still in action. Although the situation was never quite as bad as Churchill and earlier commentators asserted, if the raids on airfields, industry and supporting facilities had continued, the deficit, which grew to a peak of 181 at the end of August, would most certainly have accumulated to reach near critical proportions.

Fortunately for the British, the Luftwaffe’s own considerable losses for what appeared at the time to be little decisive result, led in early September to a change in strategy. The Luftwaffe’s attacks on the air defence system of the British Isles gave no indication that the RAF’s position had been considerably weakened. Furthermore, Hitler, in response to Bomber Command’s raids on Berlin, now sanctioned retaliatory raids on London. On 4 September, he raged:

When they declare that they will attack our cities in great measure, we will erase their cities. . . . The hour will come when one of us will crack, and it will not be National Socialist Germany!
Indeed, the subsequent raid of 7 September which heralded this new approach did look spectacular. Members of the British Air Council stood on the roof of the Air Ministry and watched (before seeking shelter below) the impressive sight of 600 bombers and 300 fighters flying above the Thames.¹⁶⁸ In the ensuing raid the London docks were set alight. The city’s firemen fought nine fires, which required over 100 pumps, and one intense inferno which required over 300 pumps to bring it under control.¹⁶⁹ However, the Luftwaffe’s change in strategy had given the British Isles’ defensive system, particularly Fighter Command, the breathing space it so badly needed.

If the Germans had had a four-engined bomber effectively capable of flying from Scandinavian airfields at Sola and Aalborg as well as France, Holland and Denmark in this decisive period, it may have tipped the scales in the Luftwaffe’s favour. Accordingly, when attempting to explain the failure of the Luftwaffe to gain mastery over the RAF, historians and military commentators often cite the lack of true four-engined bombers as a significant factor.¹⁷⁰ This view was also held by many of the participants, who, with the benefit of hindsight, agreed with Kesselring’s post-war lamentation regarding the Battle of Britain: “We needed four-engined bombers with great range of action, climbing power, speed, load capacity and armament.”¹⁷¹ With regard to Kesselring’s observation, and bearing in mind the RAF’s aircraft and personnel crisis in the period 24 August to 6 September, it is possible to enumerate three reasons why significant numbers of four-engined bombers would have enabled the Luftwaffe to achieve air superiority over the RAF. First, due to their long range they would have stretched the defensive resources of the RAF to breaking point.¹⁷² Second, the much greater weight of bombs dropped might have struck a decisive blow against Britain’s air defence system. Third, the high altitude attainable by a four-engined bomber would have placed the defending fighters at an extreme disadvantage.¹⁷³

As Richard Suchenwirth notes in his post-war study of the battle, “long-range bombers could have created an entirely different situation, due to their ability to appear anywhere over the British Isles” and British defences, “admirably developed for use against the German medium bombers, would have been so thoroughly dissipated by long-range bombers that defeat would have been inevitable.”¹⁷⁴ Although the “inevitability” of defeat is doubtful, it is clear that a strategic bomber would have enabled the German air force to strike not only from north-west France against south-east England and London, but also from Norway to the furthest corners of the British Isles. After 15 August, instead of having to transfer its bomber forces from Norway to France, due to the limited operational radius of its twin-engine bombers, Luftflotte 5, with a handful of squadrons of long-range bombers
could have continued the fight against Britain from its Scandinavian bases. Bombers such as the Heinkel He 111 and the Ju 88 were relatively limited in their operational areas with a range of some 2,000 and 2,500 kilometres respectively. If the Germans had been able to deploy an aircraft with a 5,500 to 6,000 kilometre range, as envisaged in the He 177, flying from bases encompassing Norway in the north to France in the south, they would have forced the RAF to spread its defensive net further afield. Bearing in mind the RAF’s critical situation in August and early September, if it had dispersed some of its squadrons away from south-east England to combat long-range bombers it may have been forced to surrender ascendancy in the air.

Moreover, the production of a heavy bomber fleet would have significantly increased the punching power of the Luftwaffe. The proposed He 177 would have been able to deliver 7,000 kilograms, not far below the load carried by two of the most successful Allied bombers, the British Lancaster and the American B-17 “Flying Fortress” (at 10,000 and 8,000 kilograms respectively). The mainstays of the German aerial assault, the He 111 and the early Ju 88s, could carry only between 1,000 and 2,000 kilograms. Consequently, the over-emphasis on the twin-engined bomber severely limited the Luftwaffe’s potential for destructiveness. In light of what the Germans accomplished in August and early September against the British aircraft industry and air facilities with twin-engined bombers, it is apparent that significant numbers of four-engined bombers would have wrought even greater damage. The potential which existed can be seen in August 1942 when, during operational trials from Bordeaux-Mérignac, an He 177 dropped a single 250-kilogram bomb on Bristol’s Broad Wier district, killing 45 civilians and injuring an additional 66. This was the most destructive single bombing raid to occur in Bristol during the entire war.

These operational trials also highlighted the advantage of altitude. In 1940, the available British fighters would have been at an extreme disadvantage against a bomber like the He 177, which could enter their air space at an altitude of up to 8,000 metres. Moreover, the He 277, which differed from the He 177 by having the customary and practical layout of four separate engines, was able to operate at an incredible 15,000 metres. Although only eight He 277s were ever made in 1943-44, they did demonstrate what the Luftwaffe could have achieved but for decisions made during the pre-war period. The He 111 and Ju 88 on the other hand, operated at altitudes ideally suited to Britain’s defending fighters. Consequently, they needed fighter escort which both the Bf 109 and 110 were ill-equipped to provide when flying from France and Norway respectively. The
low speed of the twin-engined bombers meant that once over England the Bf 109 had only twenty minutes' combat time, not enough to provide adequate cover, especially since the RAF often held off until the fighter cover had turned for home before attacking; while the unsuitability of the Bf 110 had been graphically demonstrated on 15 August, and subsequently required to be escorted itself in missions over Britain. A high altitude bomber in 1940 would have put RAF defenses at a disadvantage because of the time required to reach the height of the incoming bombers. This was particularly true of the Hurricane and early Spitfire models—the very aircraft which had severely cut up Luftflotte 5's bomber and twin-engine fighter force on 15 August—whose performance declined considerably at higher altitudes.

To appreciate the difficulties required to meet high altitude bombers, a cursory examination of what took place with regards to twin-engined bomber raids from France clearly shows the constraints the defenders faced. A bomber travelling from Pas de Calais to London, a distance of 145 kilometres, at 300 kilometres per hour took twenty-eight and a half minutes. The British fighters needed approximately six and a half minutes to climb to 4,600 metres, ten minutes to reach 6,000 metres, and additional time to manoeuvre into a suitable attack position. When the inevitable delays between radar, filter room and assessment by the controller are added to the time needed to reach the incoming bomber, the margin between a successful interception and arriving too late was very narrow indeed. If the RAF had had to contend with a high altitude bomber travelling at over 6,000 metres, interception would have been even more difficult because the performance of both British single-engined fighters fell off markedly above 3,600-4,600 metres. Even with the earlier warning given by radar of incoming raiders over the North Sea from Sola and Aalborg, the RAF still would have been hamstrung by the attacking altitude of high-flying four-engine bombers. This point is further attested to by the fact that it was not until 21 January 1944 that a He 177 was shot down over Britain, significantly by a high-altitude Mosquito. In 1940, the RAF simply did not possess the defensive fighters required to combat adequately any German high-altitude bomber.

The potential of a four-engined bomber flying at great altitude was demonstrated in the East as late as 1944. Although the ninety He 177s deployed on the Eastern Front in the spring of 1944 could have struck at strategic targets, they were deployed in support of the Army against Soviet troop concentrations and supply lines. Attacking in daylight at about 6,000 metres, only a small number were lost because few Soviet fighters were able to reach
an attacking altitude, and those that did rarely pressed home the attack against the heavy defensive armament the He 177 then boasted.\textsuperscript{186}

Of course, a cheaper and perhaps less time-consuming alternative to the production of a four-engined bomber might have been the development of a long-range escort fighter. Given the short range of the Me 109 and the poor performance of the Me 110, a specially designed fighter capable of flying over long distances—along the lines of the celebrated Anglo-American Mustang P-51—would not only have provided cover to \textit{Luftflotten} 1 and 2’s bombers, but directly challenged the aerial supremacy of RAF fighters over Britain. Moreover, not only would it have solved the escort problem for medium-bombers operating from French bases, it would have certainly allowed \textit{Luftflotte} 5 to operate from Norway with adequate fighter protection for KG 26 and 30’s bombers. Although this line of reasoning has much merit, it fails to take into account the fact that while the He 177 was designed as a long-range bomber, it had, as already noted, also been earmarked for a task which no single-engine fighter could accomplish: long-range maritime reconnaissance and anti-shipping duties.

\textbf{Norway, the “Siege of Britain” and the Condor}

It is worth noting that the four-engine bomber may well have achieved Jodl’s belief, expressed on 30 June 1940, that a blockade would have brought the British to their senses without an invasion:

\begin{quote}
In conjunction with propaganda and terror raids from time to time—announced as “reprisals”—a cumulative depletion of Britain’s food stocks will paralyse the will of the people to resist, and then break it altogether, forcing the capitulation of their government.\textsuperscript{187}
\end{quote}

As Adolf Galland, the famous German fighter ace noted, had the Luftwaffe concentrated all its efforts on ports and coastal convoys “they might well have brought Britain to her knees since Britain’s endurance without imports was only about six weeks.”\textsuperscript{188} Notwithstanding Galland’s highly speculative estimation, it is true that Britain was heavily reliant on imports to feed its people, maintain its industry and keep its armed forces equipped and supplied in the field. At the beginning of the war, it was estimated that Britain needed some 55 million tons of goods by sea, including all of its domestic oil requirements and about half of its food needs.\textsuperscript{189} Severing Britain from these essential imports via an investment of its ports and shipping lanes could only be achieved by a combination of U-boats and four-engined long-range reconnaissance-bombers.
That such aircraft operating from Norway and France could have gained much was demonstrated by Luftflotte 5 before and after the decision to cancel Seelöwe had been finalised, when with miserly numbers of barely adequate aircraft impressive results were achieved. In July 1940, Stumpff’s forces participated in the anti-shipping campaign by sending X Fliegerkorps’ bombers and the naval units of KüFlGr 506 in numerous successful attacks on convoys plying the waters off Scotland’s east coast. Sorties were undertaken in the Orkney area on 6 July, south of Iceland on 12 July, and on Britain’s east coast on 18 July. In these operations two destroyers and one patrol vessel were sunk, while a cruiser and 17 steamers were damaged. Stumpff’s air units were also engaged in mining operations off Aberdeen, the Firth of Forth, Berwick-on-Tweed, Hartlepool and Middlesborough. As Walter Gaul has noted, regarding the whole effort by all the Luftflotten involved:

The period from the end of June up to the middle of August thus demonstrates the capacity of an air force efficiently controlled and given one objective, in this case the destruction of enemy shipping. As a result of the reciprocal use of mines and bombs, of alternation between day and night operations, of the appearance of bombers with torpedoes and bombs at scattered points on the coast and the extension of aerial minelaying operations to the west coast of Britain as far as Belfast, the enemy was faced by colossal tasks.

In this period, between 500 and 600 mines were laid during 50 to 60 bomber sorties flown against British shipping. Although this had given a taste of what could have been achieved in a proper “siege of Britain”, the campaign against shipping and ports was relegated to secondary importance with the issuing of Directive 17, and the main effort was switched to land-based targets. Although Luftflotte 5 continued its involvement in these coastal operations throughout the Battle of Britain, concentrated attacks against shipping targets were not resumed until November 1940 when the real impetus had gone out of the air war against Britain.

Although attacks against coastal targets were important, to complete the economic strangulation of Britain, the Germans required aircraft capable of engaging in longer-range anti-shipping and maritime reconnaissance in close co-operation with the U-boat arm from bases in Norway and France. The advantages of having suitable aircraft available for U-boat operations were readily understood by all those involved in maritime warfare. First and foremost, in submarine operations the target has to be located, and with the decline in its own air arm, and the dearth of long-range aircraft available for maritime operations, the Navy was forced to use U-boats for reconnaissance. This was a task for which it was most
ill-suited, since its very low conning tower only allowed a maximum visual range of 30 kilometres, which in turn could be greatly reduced in poor weather and heavy swells. Nevertheless, without suitable aircraft the Navy was forced to use these vessels in the “Reconnaissance Line Abreast” formation which consisted of up to four or five U-boats—but often rose as high as 30 boats later in the war—moving on a parallel course and close enough for their range of vision to overlap.\(^{192}\) This strip formation, however, was very inefficient, because inaccurate navigation coupled with fog, rain or heavy seas easily broke up the line of vessels and made it possible for convoys to slip through the line unsighted. Moreover, given the expanse of the Atlantic Ocean, the convoy could easily pass either side of the U-boat’s relatively small reconnaissance strip without mishap, even without the aid of poor weather. In addition, once a convoy was found, U-boats experienced great difficulty in shadowing it, especially as the convoy would make a change of course of up to 20 degrees at three to 15 minute intervals.\(^{193}\) Following this zigzagging convoy during daylight hours necessitated U-boats maintaining visual contact with the convoy without being spotted themselves. This usually involved travelling on the surface, since a submerged U-boat was reduced to a snail’s pace of four knots, and that only briefly, before soon falling well behind the merchant vessels. Thus, only after a convoy had been spotted and successfully shadowed were U-boats directed into the path of oncoming merchantmen to achieve their primary task, the attack. Clearly this method of reconnaissance was a fairly hit-and-miss affair, and, with the limited boats available, an extremely inefficient method of waging warfare against enemy shipping.

Unlike the poor view afforded the U-boat, aircraft were able to reconnoitre a huge expanse of water in single sweep, which even an extremely large formation of U-boats travelling abreast could never hope to cover. Having spotted a convoy, the aircraft could then shadow it and report course changes. This information allowed U-boat Command to bring its forces together into a favourable position ahead of the convoy for a massed attack. Dönitz, as Commander U-boats, was only too fully aware of the potential of air reconnaissance since his own boats were of little value in this area because, as he admitted, their “radius of vision is too small.” “Air reconnaissance on the other hand can obtain for us clear and accurate information with regard to the position and movement of enemy shipping at sea”, he continued in a December 1940 summary of demands submitted to OKM, “and thus give us the data upon which we can group our U-boats to the greatest advantage.” On top of this, he stated that air attacks should be encouraged, since the “more the air arm attacks, damages and sinks ships, the more it harasses and distracts the enemy and throws
him into confusion, the better pleased the U-boat arm will be.” Nevertheless, although as early as 8 June 1940 he had seen the potential to use the newly-won bases in northern France “to carry out air reconnaissance, aimed at discovering the presence of the enemy convoys”, it soon became clear that they lacked aircraft of necessary range and it was only occasionally that “one solitary plane” was available to fly “one solitary sortie”. Consequently, in the second half of 1940 Raeder was unable to co-ordinate a single combined operation that resulted in any significant success. The following entry for 14 December 1940 in the U-boat Command diary summarised the frustrating situation:

Close co-operation has so far been carried out with the following units:
1. Coastal Air Group 406, Brest, which is tactically subordinate to Group Command West. Their long range aircraft type BV 138 are however grounded for about two months because of technical defects.
2. KG 40 Bordeaux—in war independent [in other words, officially no contact]. Co-operation by personal agreement. Type FW 200. At present generally only one aircraft out by day.
3. Luftflotte 5 flies reconnaissance of a certain area on special request in each case. So far only carried out once. Recently requested again but refused because of lack of forces.

As in the Battle of Britain, Norway was simply unable to rise to the high pre-Weserübung expectations as a base for Luftwaffe operations in the “siege of Britain.” Luftflotte 5’s cupboard was bare of long-range maritime aircraft, and its so-called Long-Range Reconnaissance Group (Aufklärungs Gruppe) was really made up of medium-range machines such as He 111s, Ju 88s and Do 17 flying boats.

As in the invasion of Norway, when true long-distance machines had been required, the most suitable aircraft available to support Dönitz’s U-boats were the Condors, now stationed in France. An economic strangulation via the investment of its ports and shipping lanes by combining the U-boat and aircraft like the Condor may have precipitated a negotiated settlement with Britain, especially if enough of them had been available for deployment in both France and Norway. This sleek civilian airliner was adopted by the Luftwaffe for use in long-range reconnaissance and anti-shipping activities. It was never a true strategic bomber stressed for heavy military use, as testified to by the number that littered Luftwaffe airfields with broken backs, but, as it had shown during Weserübung, where it was deployed in sorties no other German aircraft could reasonably be expected to cover, it proved to be a most useful aircraft for the role to which it was adapted. Flying from Bordeaux-Mérignac in June 1940, I./KG 40 Condors began dropping 1,000-kilogram experimental mines in port entrances on England’s east coast. However, the Condors’
real worth became apparent during August and September 1940 when operating as anti-shipping aircraft they sank no less than 90,000 tons of shipping, and became widely feared after bombing the 42,000-ton liner Empress of Britain on 26 October.\textsuperscript{197} During 1940, the Condors—which Churchill dramatically dubbed the “Scourge of the Atlantic”—sank over 580,000 tons of Allied shipping.\textsuperscript{198} Whether long-range aircraft like the Condor—or a more suitable aircraft like the He 177—flying from France and Norway could have tipped the scales in the Battle of the Atlantic in Germany’s favour we might never have known, were it not for Göring taking a hunting trip in early 1941.

Göring goes Hunting and Dönitz gets his Planes

On 2 January Dönitz had once again taken his complaints to Raeder, who on this occasion sent him to see Jodl in Berlin. Dönitz explained his predicament and his desperate long-range reconnaissance requirements to the OKW Chief of Staff. Seeing that Jodl was sympathetic to his plight, the U-boat commander requested the use of the Luftwaffe’s longest ranged planes, the Condors of I./KG 40. Fortunately for Dönitz and Raeder, the Reichmarschall was out of town on a shooting trip, and when the matter came to the attention of Hitler, he simply placed the 12 Condors of I./KG 40 under Commander U-boats’ tactical command.\textsuperscript{199} Hitler, although more concerned with plans for the invasion of the Soviet Union, had already been pestered by Raeder on a number of occasions in December on which the Großadmiral had impressed upon his Führer that support of U-boats “by air reconnaissance, working together in closest possible co-operation in the operational area, is of decisive importance for increasing the effectiveness of submarine warfare”.\textsuperscript{200} Thus Hitler had already been primed by Raeder and was prepared to accede to this reasonable request, but Göring, upon hearing of the loss of the aircraft promptly demanded their return—a demand which Dönitz flatly refused. More than a little miffed, Göring spat out that the Commander U-boats need not expect any future co-operation from the Luftwaffe. Nevertheless, since I./KG 40’s commander was none other than the former naval officer, Oberstleutnant Harlinghausen, who had covered himself in glory during the operations in Norway, Dönitz had little to worry about with regard to tactical deployment.\textsuperscript{201} Upon receipt of the Condors, Dönitz realistically commented:

This order marks a decisive advance in U-boat warfare. It is only the first step in this direction and in view of the few aircraft available and the various technical difficulties still to be resolved, the immediate effect will not be great. However, I intend to gain the best results from the co-operation.\textsuperscript{202}
Ironically, the first successful joint operation came about by a U-boat leading the Condors into the kill rather than the other way round, when on 8 February 1941 a boat sighted a Gibraltar Convoy (HG 53) homeward-bound. The U-boat was ordered to shadow the estimated 20 vessels (18 steamers, one destroyer and a gunboat) in order to guide the aircraft in. After the U-boat had sunk two of the convoy’s merchant ships, six Condors then sank a further five. *Hipper*, which was in the region then chimed in, sinking a straggler. Dönitz’s staff were rightly pleased:

Great importance is attached to this first success of an operation by aircraft brought to the enemy by a U-boat, not only because of the tonnage damaged, but because it proves for the first time that even at this early stage cooperation between U-boats and the Luftwaffe can lead to considerable success.

The combined operation was the first of its kind for the Germans and tantalisingly showed what could be achieved, given the resources and forward planning. Nevertheless, this success was more often the exception than the rule, because the Navy and the Luftwaffe simply lacked enough aircraft for such missions, and the very success of the combined operation led to the British spreading their convoys further afield, particularly along northern routes as far as Iceland. U-boats were similarly sent into these waters, but providing adequate aerial reconnaissance was another matter. As promised, Göring refused to transfer I/KG 40 to Stavanger so that they could operate from there in support of the U-boats. Unable to fly directly from Stavanger—the ideal base, in conjunction with those in France, from which to completely encircle the British Isles—greatly reduced the effective range of the Condors in the war against Britain. To overcome these difficulties, the Condors, from the third week of February 1941, would fly east of the British Isles from Bordeaux, reconnoitre the North Channel, land at Sola and return via the same route the following day.

The success of this and later operations, alongside concerted lobbying by Raeder and Dönitz, brought about a change in emphasis in the war against Britain. In his supplement to Directive 9, “Instructions for Warfare against the Economy of the Enemy” (26 May 1940), and in 17, “For the Conduct of the Air and Sea War against Britain” (1 August 1940), Hitler had demanded that Luftwaffe attention be placed on the source of Britain’s air power—the RAF and its supporting infrastructure—while operations against shipping were of secondary importance. But in Directive 23 of 6 February 1941, “Guidelines for the Warfare Against the British War Economy”, Hitler now believed that “contrary to our former view, the greatest effect of our operations on the British war
economy was caused by the high losses in shipping inflicted by sea and air warfare.\textsuperscript{206} Rescinding Directives 9 and 17, he stipulated in the freshly drafted directive that it would be "desirable in the future to concentrate air attacks more closely and to deliver them primarily against targets whose destruction supplements the naval war."

Certainly, Göring was moved enough by the directive and, no doubt, the loss of the Condors, to initiate the Luftwaffe's first genuine attempt at co-ordinating operations with the Navy in a systematic manner. A number of Luftwaffe air commands designed to engage in maritime operations were formed: Fliegerführer Atlantic, which, as the name implies, covered the Atlantic; Führer der Seeluftstreitkräfte (F.d.Luft), designated with providing air reconnaissance in the North Sea (between 52° and 58°) and the entrance to the Baltic, plus providing air cover to U-boats as far as Cherbourg; and Fliegerführer Nord, charged with supplying reconnaissance for U-boats, protection for German warships and shipping and anti-shipping duties north of 58°, that is above Scotland.\textsuperscript{207} Other smaller areas were covered by elements of Luftflotten 2 and 3. Despite the establishment of these new commands, the Luftwaffe's main emphasis still rested firmly on the Continent. Even though Directive No. 23 stressed that these duties were to be undertaken, Hitler cautioned in the directive that "a large portion of the Luftwaffe and a smaller proportion of naval forces" assigned for these duties may well be "withdrawn in the course of the year for employment in other theatres."\textsuperscript{208}

Even at their inception, the commands were painfully small, and they would be further reduced as the war drew on. While Fliegerführer Atlantic was the largest force, it only boasted two bomber groups of He 111s, a small number of Condors, and a coastal air command group with eight squadrons, typically equipped with He 115 floatplanes, Ar 196 seaplanes, and BV 138 flying boats.\textsuperscript{209} A squadron of Ju 88s was to supplement the force. L.d.Luft was made up of only two coastal air staffs with six squadrons. Fliegerführer Nord was equipped with two so-called long-range Ju 88 squadrons and three Do 18 flying boat squadrons. Aside from the numerical inadequacy of these forces, considering the sheer enormity of ocean they were supposed to cover, none of the forces, particularly those of Fliegerführer Atlantic and Fliegerführer Nord, had any significant numbers of true long-range aircraft.

Meanwhile, notwithstanding the poor weather over Norway during February and March 1941, the Condors proved the worth of long distance aircraft to the war at sea by making a number of important sightings that led to major U-boat operations.\textsuperscript{210} A Condor making its way to Sola on 19 February made the first sighting of a convoy numbering some
45 ships, 130 kilometres north-west of Cape Wrath. Based on this report, all available U-boats were directed southwards from their waiting point near Iceland to set a contact line across the path of the westbound convoy (OB 287). Two more aircraft picked up the vessels the next day. Nevertheless, the Condor crews' reports were so inexact that the boats failed to make contact with the vessels and the operation was called off on the third day. On 22 February, an aircraft flying the return route from Stavanger sighted westbound convoy OB 288, 66 kilometres off Lousy Bank. Though a further machine was detailed to reconnoitre the next day, this was not possible as the convoy was at that stage judged to be at the extreme perimeter of the Condors' range. Nevertheless, contact was made on 23 February by a single U-boat and then four boats were able to attack the convoy overnight sinking nine ships, with only torpedo failures preventing a larger haul for the Germans. A simultaneous action against OB 284 netted two more ships.

This success was followed by a U-boat chancing on OB 290 between 25 and 27 April. The sighting was made by Günther Prien who shadowed the convoy until Condors could make contact; when they did, nine vessels were sunk. When added to Prien's hits, this meant that the convoy lost no fewer than 12 ships. Dönitz's diary noted that according to "U-boat reports I./KG 40 attacked with considerable success at midday with one and in the evening with five aircraft." This operation was followed on 2 May by another large, but this time unsuccessful undertaking. After a I./KG 40 aircraft spotted OB 292 west of North Channel, numerous U-boats were diverted to the area, and by the following day were arrayed in a patrol line to intercept the oncoming ships. On 3 May, though, the convoy was lost despite three Condors scurrying the area and was not picked up again until the next day, when 250 kilometres north of the original sighting. Although a new line was established, continued contact proved impossible, and when the convoy passed beyond the range of the Condors the operation was abandoned. The close co-operation by U-boats and aircraft did not go unnoticed by the British, and in his 6 March directive for "The Battle of the Atlantic", Churchill, fearing the imminent success of the German's attempt to cut off Britain from its food supplies and the United States, declared we must "take the offensive against the U-boat and the Focke-Wulf wherever we can and whenever we can."

Notwithstanding the British warlord's concerns and the early promise of these Condor-U-boat undertakings, combined operations from January to May revealed that there were simply not enough aircraft to meet the demands of the Navy. On the whole, the number of machines available were too few to pull the noose tightly around Britain. Over this period, on average only two sorties could be flown daily due to the handful of
operational aircraft. Moreover, despite its reputation as a long distance aircraft, the Condor's range was still below that really required for work in a vast ocean. Even though the Condor was capable of up to a 3,370 kilometre flight—nearly 1,000 kilometres further than the twin-engine Ju 88 bomber—this fell well short of He 177's 5,500 kilometre range.\textsuperscript{219} Thus, despite the fact that Condors were able to reach the main area of reconnaissance in this period, west of the North Channel, they were unable to do little more than sight and report convoy positions. In other words, it was simply not possible for them to shadow the convoy for any length of time so that U-boats could follow homing signals onto the ships.\textsuperscript{220} Certainly, once a convoy had spotted the Condor and observed the aircraft abandon its shadowing position, the ships were diverted along another route, greatly impeding the U-boats' subsequent attempts to make contact.\textsuperscript{221} That they did not have enough of these aircraft to base a squadron or two in Norway undoubtedly compounded this problem, since the Condors were forced to take the route from France around the west coast of Ireland and then on to Stavanger, rather than direct operations over the North Channel from Norway.

Added to this, errors in navigation, caused by the difficulties of making precise measurements over extremely long flights—a good portion of which were undertaken at night buffeted by strong winds—meant that at times the position of a convoy as reported by a Condor was over 100 kilometres out.\textsuperscript{222} Under these circumstances, flight reports detailing the position of sighted vessels could often lead U-boats astray, and at least two of the operations undertaken by U-boats in February and early March were failures due to poor Luftwaffe plotting of the convoy's location.

Generally, though, even with these teething problems and taking into account the shift in convoy routes to colder climes, which meant the Germans were unable to put effective reconnaissance into the air from Norway, the air effort had shown that it was worth persevering. In May, the Luftwaffe sent 48 ships (totaling nearly 158,000 tons) to the bottom of the ocean. By June, the delivery rate of U-boats reached 15 a month, and Britain was starting to feel the impact of the war at sea as the U-boats dispatched 284,000 tons and the Luftwaffe 195,193.\textsuperscript{223} In total, and including losses from all causes, May saw 585,400 tons of shipping (140 ships) sunk—the worst month of the war so far for the British.\textsuperscript{224} Winston Churchill had calculated that his country needed 31 million tons of imports a year (excluding fuel stocks) with which to maintain Britain's war footing. But under the present rate of losses, the nation could only expect 28 million tons. With a handful of U-boats and even fewer aircraft, Dönitz had indicated what could have been
done had he been given the requisite forces. In 1941, the Condor alone sunk over one million tons.225

Unfortunately for the Germans, the small number of these four-engine machines produced (26 in 1940 and 58 in 1941) precluded extensive deployment.226 Coupled with the small number of U-boats available—until the spring of 1941 Dönitz rarely had more than a dozen boats at sea at any one time—this situation prevented the introduction of true wolf-pack tactics until 1942. This meant that the German attack evolved slow enough for the enemy to implement effective countermeasures.227 However, the results attained by such a small number of aircraft and U-boats revealed the potential of such operations, especially if the Luftwaffe had been able to deploy significant numbers of four-engined bombers purpose-built for anti-shipping and maritime reconnaissance duties. In his post-mortem of the Battle of Britain, Adolf Galland bemoaned the failure of the Luftwaffe Command to concentrate on the enemy’s weakest and most vulnerable points, which were “without doubt, his supply routes from overseas”:

Outstanding successes against them could have been scored in the initial stages, for the range of British fighters was not great enough to enable them effectively to protect merchant shipping. It is almost certain that if all the forces of the Luftwaffe had been concentrated to operate in conjunction with the U-boats and warships, a decisive blow could have been delivered to British supply lines.228

As a British historian, Richard Overy, wrote: “Only Göring’s refusal to divert more aircraft to the war at sea and the failure to produce a satisfactory long-range bomber built for the purpose prevented aircraft from achieving an even higher degree of destruction.”229 In this sense, therefore, the lack of a four-engined bomber was a most significant factor because it may have, coupled with the use of U-boats and twin-engined bomber raids on Britain’s eastern ports, starved Britain into surrender.230 That the Germans sank six million tons of shipping up until the summer of 1941 suggests that a greater emphasis on the production of U-boats and long-range maritime aircraft could well have turned the tide of war in their favour.

By at least one assessment, Germany probably needed in its daily operations 40 to 50 Condors for Britain to be effectively blockaded. That is, after taking into account servicing and losses, a full complement of up to 150 aircraft. With a sizable force of Piratenflugzeuge flying from France and Norway which were able to effectively reconnoitre an area covering 40°N to 65°N and up to 30° west (that is a square area of sea encompassing the British Isles, with Lisbon at its south-eastern corner, stretching into the Atlantic as far as the Azores on its south-western point, then climbing northwards as far
Iceland and then westwards towards Trondheim), it is difficult to see how British shipping could have escaped observation.\textsuperscript{231}

**Too Little Too Late**

Ironically, one of the most effective Allied U-boat countermeasures was the deployment of their own long-range aircraft. Unlike the Germans, who on any one day during the Battle of the Atlantic had on average only three aircraft actually in the air by 1942, the Allies had devoted roughly 500 aircraft to the battle, which by at least one estimate equated to perhaps ten times the Luftwaffe’s effort.\textsuperscript{232} Even without the very long-range (VLR) planes it would boast in the latter half of the war, as early as 1941, Coastal Command’s flying boats, the Sunderland and the Catalina (which could patrol for two hours at a distance of 960 kilometres and 1,280 kilometres respectively), were pushing U-boats to operate beyond the range of their only aerial support, the Condors. In particular, the Sunderlands based in Iceland were doing an admirable job in beginning the process of closing the gap through which Allied convoys had to pass without air cover in the North Atlantic.\textsuperscript{233}

To counter the effectiveness of Allied aircraft and aid his U-boats in 1942, Dönitz recalled that:

\begin{quote}
We had for a long time been eagerly awaiting the advent of the He 177, which was said to have a radius of action of some 2,400 kilometres which therefore would operate in those sea areas in which the U-boat arm can still attack convoys, provided that it is supported by the German Air Force in operations against enemy air cover.

The Naval Commander-in-Chief strongly urged Luftwaffe headquarters to accede to this request for the employment of the He 177s in the war at sea, and there seemed to be every prospect of their being so used within a few months. In any event they were destined never to become operational.\textsuperscript{234}
\end{quote}

By September 1942 the situation had become so bad, and Allied aircraft so effective against both U-boats and the small number of lightly-armed Condors, that the Navy felt that they now needed a more heavily-armed aircraft that could reach areas even beyond the range that the long-awaited He 177 was supposed to deliver. The Luftwaffe replied on 3 October 1942 that the request:

\begin{quote}
for the production of an aircraft capable of giving cover in the more distant areas of the Atlantic cannot at the moment be met. For this purpose even a type similar to the American bomber would be required. Desirable as the possession of such an aircraft undoubtedly is, we have not, at present the necessary technical data, from which it could be developed.\textsuperscript{235}
\end{quote}
Behind the scenes, however, even Göring was fuming, and in a heated exchange with Jeschonnek over the range of the He 177 blasted:

That is all nonsense. The enemy has aircraft with an operational radius of between 3,000 and 4,000 kilometres, and here we are slipping back by a tenth. I am not trying to be funny, but I really wonder whether it would not be a good thing for someone here to go out and procure the best of the enemy’s four-engine aircraft and halfwittedly copy it, then present the copy to our aircraft engineers saying “You are too dull to find anything better, so copy this junk.”

After the disaster at Stalingrad in the winter of 1942-43, and with it, his continental plan of conquest, even Hitler was forced to place greater emphasis on maritime strategy. On 23 March 1943, he meet with senior aviation industry representatives to consider the long-range aircraft situation. From his audience he demanded a bomber capable not only of attacking London by day and night at an altitude beyond the reach of defending fighters, but also capable of attacking Allied convoys far into the Atlantic. The aircraft selected to meet the Führer’s demands was the He 177’s natural successor, the He 277. Impractical to the last, Göring felt Hitler’s pipe-dreams could actually be realised even at this late juncture. In May 1944, just before the landings at Normandy in the West and as the Soviets prepared to enter Poland in the East on their way to Berlin, the Reichmarschall revealed that he had absolutely no comprehension of the situation at hand, when he set the monthly delivery rate of the He 277 at no fewer than 200 aircraft a month. Of the eight that were actually produced, only two or three ever tested their systems in flight.

Meanwhile, German chances of U-boat success in the Battle of the Atlantic had rapidly declined by 1942, and during 1943 any chance of winning the war at sea disappeared. The final nail in the coffin of the German effort arrived in March 1943, when the long-range American-built B-24 Liberator entered the fray, effectively closing the gap by providing convoys with air cover all the way across the Atlantic. Successfully converted from a high-altitude bomber to a very long-range, low-altitude, anti-submarine role, the Liberator could spend three hours on patrol at 1,760 kilometres from base. This aircraft, and others, using radar, effectively brought an end to German wolf-pack operations, since they forced the U-boats to remain submerged for greater periods of time. In addition to this, by 1943 the British had drastically reduced their need for imports through rationing from 60 million tons to 26 million tons per year, while better port management had resulted in a reduction in port congestion and a rationalisation of Britain’s shipping schedules and imports, producing a saving of three million tons in 1941 alone; moreover, the Allies’ ability to build vessels faster than the Germans could sink them,
thanks to the entry of the United States into the war in late 1941, meant that by mid-1943 they had more than enough shipping to meet Britain’s needs.\textsuperscript{243} As Dönitz confessed in the summer of 1943, the only argument for continuing the U-boat war was that it produced a cost-effective means of diverting Allied attention away from areas of greater strategic importance to the Germans.\textsuperscript{244} Consequently, by the end of May 1943 Dönitz had to throw in the towel. As he noted in his War Diary, his own losses had now reached an intolerable level in relation to the tonnage of merchant vessels being sunk; and, he added, the “enemy air force played a decisive role in inflicting these high losses.”\textsuperscript{245} Although in the autumn of 1943 he was promised He 177s, some newly-converted Ju 290 transports—a very long range successor to the Ju 90—and the leviathan of floatplanes, the six-engined BV 222, to augment his overworked Condors, by mid-November he was forced to admit that the “enemy has all the trumps in his hand . . . On our side, as yet no air reconnaissance; the U-boat its own scout, with minimum of scouting range.”\textsuperscript{246}

That the Germans had entered the war without a long-range aircraft suitable for maritime work was the single most important factor in preventing the Luftwaffe from making use of Norway as originally planned. Certainly, had either the Navy or Luftwaffe been equipped with such aircraft in significant numbers, Norway would have served as a genuine northern arm of a deadly embrace of the British Isles. Through a combination of U-boats and long-range reconnaissance, anti-shipping Piratenflugzeuge, Germany might well have forced a British capitulation in 1942. As it was, neither the Navy nor the Luftwaffe had sufficient numbers suitable for maritime operations and once the war spread from northern and western Europe to the Mediterranean and then the Soviet Union, the Luftwaffe was increasingly unable to devote even its medium range twin-engine bombers to the likes of Fliegerführer Atlantic, let alone Fliegerführer Nord in Norway. Although it is true that the war came earlier than anticipated, and thus stymied the grand rearmament plans of both services, it is clear that aircraft for maritime deployment was never high on the Reich’s shopping list. Whether a 200-strong force of four-engine aircraft suitable for naval warfare was under the direct control of the Navy or the Luftwaffe is somewhat irrelevant; what is significant is that that no such force was ever created.

The single biggest impediment to developing such a maritime air arm was Hermann Göring. His struggle with Raeder was long and bitter, and although he was determined to command everything that flew he never really understood the demands of naval warfare and the benefits to be gained from the effective utilisation of air power at sea, whether the planes were based in Norway or elsewhere. Consequently, his efforts in this area were
lethargic and stingy. His inability to grasp his culpability in failing to develop a four-engine long-range aircraft suitable for maritime operations was revealed in February 1943:

This entire issue suffers from a complete lack of planning, which had prevailed in previous years. Also from the smug complacency which surrounded the Director General of Luftwaffe Equipment at the time, and the general reluctance to point out defects at the right time. . . . I must apportion to myself a little of the blame, insomuch as my confidence was sadly misplaced. Anyway we are here and now to formulate a definite plan for our bombers.\textsuperscript{247}

Definite plan or not, the time had already passed in which a reliable and effective four-engine bomber could have turned the war for the Germans at sea and despite his magnanimous acceptance of "a little of the blame," it is clear that the decision to cancel the earlier heavy bomber types was his alone. Moreover, once the He 177 project was set in motion his attention to it was woefully inadequate, to the point of outright negligence. Nowhere is this attitude more neatly illustrated than on the occasion of his failure to attend a meeting with Heinkel regarding a replacement for the He 177, simply because he decided to spend the day at a well-known Viennese jewellery shop.\textsuperscript{248} Alongside the baneful influence of Udet's dive bombing obsession, Göring's slap-dash attitude prevented Germany from producing the \textit{Piratenflugzeuge} it so desperately needed. Nevertheless, Göring may well have placed more stress on naval aircraft had his leader not been so sure that a war with Britain could be easily avoided and placed a greater emphasis on maritime strategy rather than that of a Continental nature. And yet it was Hitler's Continental strategy that would invigorate, if ever so briefly, \textit{Luftflotte 5}'s role in the war, when, with the fate of the Third Reich hanging in the balance on the Eastern Front, the Führer ordered Germany's northernmost air fleet to strike against the Anglo-American convoys plying Arctic waters.
Chapter 6
Luftflotte 5 versus Arctic Convoys

Herr Reichsmarschall! I beg to report the Destruction of Convoy PQ 17
Generaloberst Hans-Jürgen Stumpff, 12 July 1942

At 0315 on 22 June 1941, Hitler launched the greatest assault in the history of warfare. German armies, totalling around 3.6 million German and allied troops, 3,350 tanks and 2,700 aircraft, supported by more than 7,000 artillery pieces, drove deep wedges into a front stretching from Arctic waters to the Black Sea. It is little wonder that Hitler boasted “when Operation Barbarossa is launched the world will hold its breath.”¹

The planning for the invasion of the Soviet Union had taken shape in Hitler’s Directive No. 21, dated 18 December 1940, which stipulated that the general aim of Barbarossa was “to crush Soviet Russia in a lightning campaign,” with the final goal the erection of “a barrier against Asiatic Russia on the general line Volga-Archangel.”² To achieve this, the bulk of the Red Army stationed in western Russia was to be destroyed in a series of daring operations spearheaded by armoured thrusts, which would prevent the organised withdrawal of intact units. While by far the greater part of the invasion would be undertaken by Army Groups North, Centre and South along a front stretching from the Baltic to the Black Sea, a further sector would be established in the Far North, the Karelian Front. Decidedly the smaller arm in the invasion, the main purpose of General der Infanterie Nikolaus von Falkenhorst’s Gruppe XXI was the protection of Norway including the Petsamo area’s nickel mines and the Arctic highway running across the top of the Scandinavian Peninsula. Once accomplished, his forces were then to advance with their Finnish “Brothers in Arms” against the Murmansk railway to prevent the passage of supplies south from Russia’s Arctic ports to Leningrad and Moscow.

According to Barbarossa, the Luftwaffe’s role was to make available “supporting forces of such strength that the Army will be able to bring land operations to a rapid conclusion.” Yet the ever increasing demands on Göring’s air units made this more than a little difficult. Of a total front line strength of 3,340 combat planes in 1941, the defence of the Reich accounted for 190 machines, the Mediterranean was fitted out with some 370 (Fliegerkorps X and Fliegerführer Afrika), while those deployed in the western theatre accounted for 780, of which 680 were deployed with Luftflotte 3. Where the northernmost front was concerned, of Stumpff’s total complement of 180 aircraft, Luftflotte 5 was forced
to make do with 120 aircraft for its duties in western Norway.⁵ In sum, then, this left the Eastern Front with only 1,945 planes, no more than 50 per cent of the Luftflotte’s total complement.

As with the war against Britain in 1940, Luftflotte 5 found itself at the periphery of the main event at hand. By the time the invasion of the Soviet Union was about to begin the air fleet had been reorganised, with Luftgau Norwegen’s headquarters situated in Oslo, Fliegerführer Stavanger covering the central and northern parts of the country, Jagdfliegerführer Norwegen controlling the air fleet’s fighter units and Fliegerführer Kirkenes established at the very northernmost reaches of the country with airfields at Kirkenes and Banak.⁴ Of Luftflotte 5’s 180 aircraft, 60 would be dedicated to operations on the Karelian Front, which was anticipated to extend up to 350 kilometres in length and in depth nearly 900 kilometres from Fliegerführer Kirkenes’ main base of operations at Banak and the furthest target, Archangel.⁵ Under the command of Oberst Andreas Nielsen’s Fliegerführer Kirkenes, was by far the weakest force involved in Barbarossa constituting ten Ju 88 bombers of KG 30, 30 dive-bombers, ten JG 77 Bf 109 fighters, a schwarm of ZG 76 Bf 110s, ten reconnaissance planes, and an anti-aircraft artillery battalion.⁶ In comparison, Luftflotten 1, 2 and 4 numbered 430, 910 and 600 aircraft respectively.⁷ In addition to raiding the ports of Murmansk and Archangel, Germany’s northernmost air fleet was charged with attacking Soviet shipping, providing close air support for the Army, interdicting troop movements on the Murmansk railroad, bringing about the destruction of Soviet air facilities, and destroying the lock controlling the Baltic–White Sea Canal.⁸

It is clear that these 60 aircraft were totally inadequate to the task at hand. Quite apart from their small numbers, the region’s climate, terrain and the emphasis placed on resources for more important sectors along the front, meant that Germans were never able to achieve their offensive goals in this theatre. In general, the land war in the Far North was a dismal affair carried out in some of the harshest conditions of the entire war on any front. “There is no favourable season for operations”, noted Earl Ziemke in a standard work on the land war in the Far North, and climate and “terrain are always enemies, particularly to offensive operations.”⁹ Although winter provided the best time for advances, since hard snow at least provided some sure footing for soldiers, the perpetual darkness make large-scale actions impossible. The only time really favourable was in late winter when daylight hours were on the increase and underfoot conditions still relatively firm. Nevertheless, the period available for advance was very short and once the spring thaw set in, impossible. The numbers of ground forces employed along the Karelian Front were, like their aerial
counterparts, never strong enough to make any great gains in the Far North, and at no time ever broke the northern stretch of the Murmansk rail line.\textsuperscript{10} Although the main weight of aerial operations were, as we shall see, directed at closing the Arctic Sea route running from Iceland to Murmansk the main land-based effort was designed to close the second and subsequent leg for supplies dispatched by the Anglo-American powers: the rail link between Murmansk and Moscow. Indeed, this line was not only important as the main artery through which war materials were pumped to the heart of the Soviet military machine, but was one of the main means by which the Red Army was able to fend off the German and Finnish advance in the Far North.\textsuperscript{11} Unlike their German and Finnish opponents, who laboured under a transportation system which at best could be described as second-rate in comparison, the Murmansk railway enabled the Soviets to assemble, mobilise and deploy troops along the entire length of the line to points of main effort whenever required.\textsuperscript{12}

With the failure of operation \textit{Silberfuchs} (Silver Fox), whose main objectives included an attempt to overrun the rail line and occupy Murmansk in 1941, and the abandonment of \textit{Lachsfang} (Salmon Catch)—another bid to sever the rail line in the following year—the Germans attempted to break the main north-south artery by other means.\textsuperscript{13} The Luftwaffe bombed the line and its bridges and made numerous attacks on the port of Murmansk and other railroad stations. But these attempts and those made by commando-style units dropped in to attack the line were only partially successful and the line was quickly repaired. In short, the terrain and climate plus the limited ground and air resources dedicated to the region were insufficient to permit any great gains. In fact, the only significant reinforcement of German resources would not be dictated by a growing demand for ground support, but rather the defence of Norway against an anticipated Allied expedition, followed by operations against the Arctic convoys. Stumpff’s air fleet, which had proved its mettle during \textit{Weserübung}, would get a chance to recapture some of its past glory in attacks on Anglo-American convoys plying Arctic waters on their way to the Soviet Union’s northern ports.

\textbf{Hitler’s Invasion Paranoia}

Although Hitler would later proudly claim that he had always planned to utilise Norway for U-boat and Luftwaffe operations against Allied convoys to northern Russia, in reality the strengthening of naval and air defences in the region in late 1941 and early 1942 was initially undertaken for defensive rather than offensive purposes. Although influenced by the winter darkness that effectively put a halt to Luftwaffe operations in the region, the
groundwork paving the way for the subsequent attacks on the Arctic convoys was based on Hitler’s fear of an Allied attack on Norway. The Führer’s concern in this region was fuelled by a British raid in the Lofoten’s area in early March 1941, which resulted in industrial plants being destroyed, vessels sunk and damaged, a number of Norwegian collaborators (“Quislings”) taken prisoner, and valuable information gathered by the British. The incursion revealed the palpable weaknesses of the German defences and poor organisational structure in Norway. On 8 March, the British raid was the first item on the German strategic agenda and the OKW Chief delivered a report to Hitler detailing the current status of the coastal defences and what measures could be taken to reinforce them. Although by the end of the year only marginal improvements had been implemented, on 25 December 1941, on the basis of clandestine information received indicating a possible Anglo-American initiative, OKW called for an up-to-date assessment of their ability to thwart such an attempt. Falkenhorst’s subsequent report said his forces would be too weak to repel it and requested 12,000 reinforcements to bring his units up to full strength and provide reserves for defensive positions in depth.

As if to highlight again the vulnerability of the German situation, the British launched their second Lofoten’s raid on 27 December. In the foray, a cruiser and destroyer force shelled and landed troops on the Lofoten and two other locations along the coast. Although the assault was brief, a jittery OKW was somewhat alarmed by the attack, feeling that it was perhaps an indication of things to come and part of an Allied probing action designed to ascertain likely weak points along the Norwegian coastline for a subsequent invasion. As an examination of the Naval Staff’s war diary reveals, whispers of an impending operation were widespread:

30 December 1941: British rumours, spread intentionally, spoke of a larger action in the next few days in order to occupy permanently the Lofoten Islands, the Vester Aalen Islands and Bodo. Eighty US transports would be used for this operation.

2 January 1942: According to an allegedly very reliable report from an agent, Swedish military circles believe that a British landing attempt in Scandinavia would most likely take place in the following areas: Alta Fiord, Tana Fiord, Varanger Fiord, Honningvaag . . . . To this would be added the political effect on the Scandinavian countries. The period between the beginning of March and the beginning of May is a likely time for such a British operation.

3 January 1942: According to a reliable agent report, Great Britain and Russia have agreed to launch a joint offensive against Finland.

6 January 1942: The Naval Attaché, Stockholm, quotes an unidentified source to the effect that there is talk at the British Embassy in Stockholm about an impending action against Narvik and the ore railroad.
Hitler was clearly shaken by the prospect, and as the year came to an end warned Keitel and Raeder that:

If the British go about things properly they will attack northern Norway at several points. In an all-out attack by their fleet and landing troops, they will try to displace us there, take Narvik if possible, and thus exert pressure on Sweden and Finland.¹⁰

So desperate was Hitler to prevent such a possibility, that he ordered Scharnhorst and Gneisenau, and the cruiser Prinz Eugen, languishing in Brest, to make a dramatic dash through the Channel for deployment in the defence of Norway.²¹ In addition, they could be used in operations against Arctic convoys, though how suitable they would prove for this task was as yet unknown. Nevertheless, should it not be possible to make a surprise breakout, Hitler contemplated decommissioning the ships so that their guns and crews could be used in reinforcing the defence of Norway.

By early 1942, Hitler’s concern had become a fixation. In a conference with Raeder on 12 January, he now thought “that if a strong task force of battleships and cruisers, practically the entire German Fleet, were stationed along the Norwegian coast, it could, in conjunction with the Luftwaffe, make a decisive contribution toward the defence of the area of Norway.“²² Ten days later, at his next meeting with Raeder, Hitler grandly proclaimed that Norway was “the decisive theatre of the war.” “On the basis of latest reports”, noted the Naval Staff diary, “the Führer is absolutely sure that Great Britain and the US are bent on attacking northern Norway in order to bring about a decisive turn in the outcome of the course of the war.”²³ He demanded that both the Army and Luftwaffe strengthen their forces in Norway, while the Navy was instructed to “exert the utmost effort to nip the British plans in the bud”, ordering “all available U-boats” to proceed there immediately. Only when told of the considerable successes being achieved by a very small number of boats in American waters the very next day, did he back away from placing “all available U-boats” in northern Norway. Nevertheless, on 24 January OKM ordered an extremely reluctant Dönitz to send eight boats into the Iceland-Faroes-Scotland area for the protection of Norway and by 15 February it was envisaged that 20 U-boats would be stationed in the region (with six in Norwegian waters and two in a state of operational readiness in Narvik or Tromsö, two at Trondheim and a further couple at Bergen).²⁴ For the land-based defences, Falkenhorst was promised his 12,000 men plus 20 so-called “fortress” battalions of older men wielding captured weapons and numbering 18,000 in all. In addition, he would receive the 3rd Mountain Division by the spring of 1942 and a Panzer Division
formed along with a build up of German coastal defences. In scenes reminiscent of March 1940, Hitler even thought of establishing a single command for operations in Norway under the same candidate for the position prior to *Weserübung*, Kesselring. Unfortunately for the Germans, however, this would never be carried out and operations in the region, though successful to a limited degree against the convoys, would have been far more efficiently executed had a joint staff with a single theatre commander been established, especially under the able command of Kesselring.

**Churchill’s Nordic Mania**

There can be little doubt that, given the opportunity, Churchill would have jumped at the chance to have another go at Norway. His interest in Norwegian operations began before the German invasion of April 1940 and would continue to occupy a special place within his fertile imagination until at least 1944. With the German invasion of the Soviet Union in June 1941, Churchill received a telegram from Stalin urging the establishment of two fronts in the West, one on the French coast and the other in the Arctic region. Not only would such a campaign in the Far North relieve some of the pressure on the Red Army in the East but, with the beginning of the Arctic convoys, secure their safe passage. From this point on, Churchill’s mania for Nordic operations increased. Under the general code-name *Jupiter*, the British Prime Minister hatched a number of schemes centred on the Far North. For example, in October 1941 *Ajax* was born, entailing the capture of Trondheim with the aid of an imaginary Norwegian underground army, followed by an advance on the Swedish border. In November 1941, *Ajax* was followed by *Marrow*, which called for an assault on Petsamo and Kirkenes. For this operation the bulk of the forces would be drawn from the Red Army and the Norwegian forces based in Britain, with support provided by the Royal Navy and a significant number of British aircraft.

Although other plans followed, based on his opinion that “we could begin to roll the map of Hitler’s Europe down from the top!”, Churchill found little support from the Americans, who like many others felt there was little to be gained from an operation in such a peripheral area and plenty to lose in men and material. At best, *Jupiter* would have been on a par with the Italian campaign, essentially an advance going nowhere, but at worst it had all the hallmarks of Churchill’s ill-conceived Gallipoli disaster of the Great War. A Chiefs of Staff report of 7 August 1942 realistically concluded that *Jupiter* “is an extremely hazardous operation . . . and the result might be a military disaster of the first magnitude . . . [Its] risks would only be acceptable if politically the results to be achieved were judged
to be of the highest importance." Therefore, in 1942 Jupiter as an independent operation gradually fell further into disfavour among sensible men, and though in subsequent years it was revived briefly as a possible alternative to, or deception for, Torch and Overlord, it never looked like taking off as the Allies were heavily committed elsewhere.

Nevertheless, the fear of such an Allied undertaking was very real in Hitler's mind and the build up of forces in Norway went ahead at a great pace. On land by the end of April 1942, Falkenhorst was pleased to see that nearly all his requests for additional manpower had been met and coastal defences were well on the way to being substantially strengthened. The transfer of naval vessels was also carried out with considerable haste. The first major surface ship to arrive was Tirpitz, docking at Trondheim on 16 January, and over the next few months a significant proportion of the German surface fleet made its way into Norwegian waters. By May, the total Norwegian-based force included one battleship, three heavy cruisers, eight destroyers, four torpedo boats and 20 U-boats positioned along the Norwegian coast from Trondheim to Kirkenes. Although these forces did not include Scharnhorst and Gneisenau, which in their famous run through the Channel had been damaged by British mines, the German naval presence in Norway was formidable.

The German naval commanders were, however, fully aware that not only did this force represent a potential threat to any Allied landing or naval operation in the region, it also remained particularly vulnerable without strong air cover. It was in this context that the Navy pushed strenuously for a build up of Luftwaffe strength in northern Norway. Even before Tirpitz had docked in Trondheim, the Navy was adamant that adequate "air reconnaissance as well as a readily available force of bombers" be made available, since the big battleship would be vulnerable should a convoy escorted by "several heavy cruisers and destroyers appear". As Admiral Hubert Schmundt, Admiral Nordmeer unhappily observed on 22 December 1941, the number of aircraft available for distant reconnaissance in his region was so small that between 1-15 December only two operations could be carried out by a couple of Ju 88s. However, soon after the second Lofotens raid, calls were being made by the Navy for the focus of Luftflotte 5's effort to be shifted northwards. On 30 December, the Admiral Nordmeer requested Stumpff to reinforce his units in northwestern Norway with pursuit planes and bombers. Luftflotte 5's commander was, however, reluctant to make such transfers which would further dilute his already thinly-spread defensive line in the west of the country and pointed out that even though his air fleet would operate "with all means at its disposal from Banak and Stavanger this depended on the situation, including the prevailing weather conditions." Actual transfers of his
precious units to Bardufoss, even temporarily, would rest on the prevailing demands in eastern and western areas.

Nevertheless, in accordance with Hitler’s wishes and the Navy’s concerns, a slow build up of air power in the region began with the transfer of the catapult ship *Schwabenland* to northern Norway to expand the reconnaissance radius available to the Navy and the transfer to Sola of the torpedo-equipped He 115 floatplanes of KüFlGr 1./406.36 This Navy squadron was subordinated to Stumpff’s command and as the Naval Staff noted, with an air of resignation, signified another depletion of their own air power resources since “the possibility of ever reassigning the squadron to the Commander Naval Air may be considered practically non-existent once such a step has been taken.”37 More significantly, by the end of December 1941, the third bomber group of KG 30 had been transferred to Norway from Holland, and early in the New Year, Stumpff received a welcome addition to his overworked and under-equipped units with the transfer to Trondheim from Bordeaux of another squadron of KG 40’s long-range Condors.38

Still, *Luftflotte* 5 was hardly a great force to be reckoned with. As the Chief of Naval Staff pointed out on 24 January 1942, regarding the air defence of Norway, the “most important prerequisite for an effective defence against enemy landing operations is the possession of a strong airpower. In this respect the present shortage of German air forces is particularly deplorable.”39 The relatively slow and meagre build up of air units in the Far North was to be expected, explained Göring to Hitler on 22 January, given the overall shortage of aircraft and the difficulties associated with the fact that the landing grounds in the Far North were relatively small and few in number.40 Nevertheless, at the end of the month Göring was prepared to order the establishment of an aerial torpedo wing. According to the plan, *Luftflotte* 5 would receive one bomber group with three squadrons of He 111s equipped with torpedoes and two further groups would be deployed with *Luftflotte* 4 and the Commanding General, Armed Forces South.41

**Arctic Convoys**

Up until this point, little attention had been paid to the 11 convoys which had already successfully made the journey from Britain to Russia, since the main focus of the build up in Norway was defensive and the convoys prior to March 1942 had been relatively small in size (averaging a mere eight vessels per convoy) and were, therefore, of only peripheral interest to the German forces gathering in the region.42 Moreover, even the Luftwaffe’s limited resources were essentially hamstrung over Arctic waters since the uninterrupted
darkness of the winter months made anti-shipping operations particularly troublesome. Thus, before March 1942, Stumpff’s air units were better employed in attacking Murmansk and the rail line.

Although the Arctic route had not been overburdened with vessels carrying supplies for Stalin’s armed forces in 1941, the numbers in each individual convoy steadily rose in 1942, and would eventually peak in November with PQ 18’s 40 ships (Russia-bound convoys were prefixed “PQ” while the return convoys were designated “QP”). This increase in volume certainly had an impact on Hitler, who was now faced with the realisation that having failed to take Moscow in 1941, the war on the Eastern Front would not be concluded in the near future. Naturally enough, his long-term planning began increasingly to focus on the Soviet Union’s major and most direct source of Allied aid, the Arctic supply corridor. By at least one German estimate, the Arctic route accounted for more than half of the Soviet’s incoming supplies in 1942. Of a total of 2.3 million tons of supplies shipped into the Soviet Union, those entering the White Sea ports of Murmansk and Archangel equalled 1.2 million tons, while the Persian ports took in 600,000 tons and the Soviet Union’s Far Eastern conduit points handled 500,000 tons. Of the materials coming in through the northern waters, 49 per cent was made up of industrial raw materials, 20 percent food, 18 percent war materials and the remaining 13 per cent was mineral oil. Of the all-important war material this included: 1,880 aircraft, 2,350 tanks, 8,300 trucks, 6,400 other vehicles and 2,250 field guns.43 With this weight of material being brought into the region for use against his forces, Hitler decided that he might as well use those naval and air units he had amassed for defensive operations against the convoys. Thus in northern Norway, Hitler’s continental strategy meshed with his Scandinavian fears as he became increasingly conscious of the importance of seaborne supplies to the Soviet war effort.

That the accumulating forces were still finding their feet in the Far North in March 1942 was demonstrated by the potentially disastrous sortie against PQ 12. In order to demonstrate the danger posed by the presence of Tirpitz in the region, it was decided to send that battleship and five destroyers against the British convoy. On 5 March, PQ 12—consisting of 15 merchantmen, escorted by a cruiser, two destroyers and two other vessels—was spotted near Jan Mayen by a Condor flying from Sola.44 Tirpitz slipped her Trondheim moorings the next day, supported by three destroyers. Over the following three days, due to inadequate aerial reconnaissance, the battleship and her escorts floundered blindly around the region between Jan Mayen and Bear Island, unable to make contact with either PQ 12, or QP 8, which was also in the area.45 Additionally, the pride of the German
11. Arctic Convoys to Russia

Navy was subjected to a frightening attack on 8 April by obsolete Albacore torpedo-bombers flying from *Victorious*, part of a strong covering force including two battleships: *King George V* and *Duke of York*, and the battle-cruiser *Renown*. While some of these vessels lingered at the edge of the action, the greater part cruised some 80 to 160 kilometres southward of the convoy, in a position to bring *Tirpitz* to battle. Fortunately for the Germans, all the aerial torpedoes missed their target and a potentially disastrous turning-point in the war at sea had been averted. Had the British planes been successful the whole naval balance would have been completely altered, since the mere presence of the battleship in northern waters tied down considerable Royal Navy strength.\(^{46}\) In general, the failure of the *Tirpitz* sortie would lead to a reluctance to sally forth with the battleship in future actions against convoys, especially since its primary task, reasoned Raeder, was defensive. This in turn led to a greater emphasis than had originally been intended on the Navy’s U-boat arm and the air units of *Luftwaffe 5* in the offensive operations that were to follow.

Just as bad weather probably saved the *Tirpitz* from an unfavourable battle with the Home Fleet, an absence of German reconnaissance aircraft prevented the battleship from striking at the convoy. Luftwaffe participation had been particularly dismal all round, even in the defence of *Tirpitz*. The sole attack on *Victorious* was made by three Ju 88s on 9 March, after a BV floatplane had sighted and shadowed the aircraft carrier from 1015 onwards. The weak bomber attack at 1545 was unsurprisingly a complete failure and after dropping their bombs wide of the target, the Ju 88s were sent packing by *Victorious*’ anti-aircraft fire and defensive fighters. A force of nine Stukas was also dispatched, but unfavourable weather forced them to break off their mission.\(^{47}\)

The difficulties experienced by the dive-bombers would be repeated throughout the attacks on convoys, reflecting the extremely harsh climatic conditions prevailing in the Arctic and sub-Arctic regions where Stumpff’s aircraft would have to fly.\(^{48}\) At the western end of the convoy route between Greenland and Norway lies one of the world’s most turbulent stretches of water. Over this 1,440 kilometre expanse, high winds laden with snow, sleet and hail push the heavy seas around the North Cape into the Barents Sea where the extremely frigid waters seldom exceed 4°C. Consequently, the chances of survival for the hunter or the hunted in the waters plied by Allied convoys and overflown by German aircraft were corresponding low, should either party end up in the drink: unless they were rescued within a very short space of time. For the convoy, the cold waters and frigid air temperatures combined to produce a potentially deadly layer of ice over the surface of vessels as they ploughed their way through heavy seas. Unless chipped off immediately the
ice from sea-spray on the smaller ships would accumulate so rapidly that vessels could become increasingly unstable and liable to capsize in rough weather.

Added to these icy Arctic waters are the much warmer waters generated in the Gulf of Mexico known as the Gulf Stream but rechristened the North Atlantic Drift as they slip northeast past the Florida Keys into the Atlantic. After bathing Britain’s southwestern coast, the North Atlantic Drift sweeps between Scotland and Iceland, still bearing a residue of its sub-tropical origins. At the top of Norway it splits into two flows, one pushing north above Bear Island and then over the western coast of Spitzbergen, while the southern stream follows the Murman coast before entering the Barents Sea. The mixing of these two currents, one very cold, and the other somewhat warmer and more saline, results in great swaths of fog swirling across the region. This unique phenomenon produced conditions both beneficial and restrictive for the German forces in the north. Although the fog would certainly hinder Luftwaffe pilots in their search for convoys, the blending of colder and warmer streams would make it almost impossible for the escorting vessels to effectively use sound detection apparatus in anti-submarine activities, since U-boat captains were able to hide their boats amongst the varying thermal layers and waters of differing densities.

In addition to these Arctic peculiarities, the region’s northern boundary advances and contracts with the seasons. In the winter months, the ice shelf can expand southwards from the Arctic Cap to within 80 kilometres of North Cape, while milder summer temperatures and the North Atlantic Drift can eat away at the ice shelf, until for a limited period, it recedes so far north that ships can pass north of Spitzbergen. On top of this, for long periods the region is either cloaked in perpetual darkness or unbroken daylight during winter and summer respectively, because of the area’s high latitude. During winter this meant that despite shipping being forced to travel closer to the Norwegian coastline and, therefore, German air and naval bases, the long winter darkness provided shelter, making it particularly difficult for the Luftwaffe to locate convoys. Meanwhile, for periods either side of these four months, the small number hours of daylight available severely restricted flying time.\textsuperscript{49} However, although the summer months allowed Allied vessels to ply more distant waters, the pack ice still stretched far enough south to force the convoys within 480 kilometres of German air bases.\textsuperscript{50} This, coupled with the lengthening hours of daylight, would be greatly exploited by the Luftwaffe in the months ahead when around the clock operations would be possible.\textsuperscript{51}

Notwithstanding the advantages of the Far North’s long summer days, overall, “Europe’s Arctic region is, judged from the flying standpoint extremely difficult” noted the
Luftwaffe’s own detailed guide to the region published in 1941. Although the climatic conditions in Norway’s most northern region varied from place to place, often dependent on the topography or latitude, on the whole the region was certainly not suited to aerial operations and presented the Luftwaffe with numerous obstacles. On top of the fog, the unsettled and cloudy weather that predominates in all seasons further hampered visibility. Low cloud above all the airfields was a determining factor in their usefulness at any given time and could make flying over the coastal regions nothing short of treacherous. Moreover, noted Werner Baumbach, the famous German bomber pilot who flew in Norway against the convoys, take-offs and landings on cement and wooden runways in narrow valleys enclosed by hills and ridges over a thousand metres high—often lashed by extremely hazardous cross-winds—would “normally be regarded as lunacy.” Ironically, it was this poor weather including the prevailing snow and leaden skies in the transition from winter to spring in March 1942 which not only grounded the Luftwaffe’s forces but probably helped save Tirpitz from meeting the Home Fleet and suffering the same fate as her sister ship, Bismarck.

Despite the late winter weather, Raeder was livid over the Luftwaffe’s poor performance and concluded that only skilful “defensive manoeuvres, coupled with good luck, were responsible for the Tirpitz’s escape”. In his meeting of 12 March with Hitler, the Großeradmiral pointed out that the extreme weakness of the German coastal defences in northern waters was evidenced by the fact that the enemy dared to advance in these waters “without being smashed by the Luftwaffe.” To improve their situation, he made a number of recommendations to the Führer regarding air power:

Strong support from all our air units in the Norwegian area, is, in the absence of aircraft carriers, an absolute prerequisite to the successful operation in the Arctic Ocean. (Air reconnaissance is needed, even if it should be at the expense of Fliegerführer Atlantic. Torpedo aircraft must be thrown into the fight.) . . . Therefore, our own naval forces should be held back at first, in order to ensure their availability for repulsing enemy landing attempts. They should be committed only after the enemy’s exact position and strength has been accurately and unequivocally ascertained by air reconnaissance, and when there is sufficient support by the Luftwaffe. . . . The Luftwaffe must be ordered to wage relentless warfare against the enemy carriers.

Aside from the Führer agreeing to inform Göring that Luftflotte 5 was to be reinforced and advised of the Luftwaffe’s revised purpose and aims in the Far North, he also pushed for an acceleration of work on the never-to-be completed aircraft carrier Graf Zeppelin.

The threat of carrier-borne aircraft to his precious battleship had not been lost on Hitler and he requested that work be stepped up on the sole surviving carrier of the four
originally envisaged under the ambitious Z-Plan. How useful such vessels would have been to the German effort in the Battle of the Atlantic is a matter of some debate but it is clear that with the premature arrival of war they could not all be completed, given the pressing needs for valuable war materials.\textsuperscript{56} Although Eberhard Weichold, former director of the German Naval Academy, argued after the war that Germany would have benefited greatly from the possession of such vessels, it is clear, given the difficulty of supporting individual surface raiders at sea in 1939-40, that it would have been beyond Germany’s abilities to supply and provision a task force large enough to protect them. Thus, as soon as the Allies departed from Narvik in June 1940, it was decided to cancel the development of \textit{Zeppelin} and send her heavy armaments to Norway as part of the build up of coastal defences. Nevertheless, the re-emergence of the idea of an aircraft carrier in 1942 reflected German appreciation of the Allied escort carriers in convoy work and the effectiveness of Japanese carriers in the Pacific.

Wishing to emulate such successes, Hitler pressed for the completion of the half-finished \textit{Zeppelin} languishing at Gotenhafen. Nonetheless, the Navy was realistic, and, despite Hitler’s enthusiasm, realised that even with an injection of additional resources the vessel would not be ready until late 1943 at the earliest.\textsuperscript{57} In addition, naval estimates calculated that even then there would be only ten converted fighters and 22 converted bombers and reconnaissance planes ready to fly from the carrier once completed, while the adaptation of torpedo-bombers was still some way off. A more practical option, the creation of a series of auxiliary carriers in the mould of Allied escort carriers, was also put forward in 1943, in which the liners \textit{Europa} and \textit{Potsdam}, and the warships \textit{Seydlitz} and \textit{Gneisenau} would be converted to carriers capable of carrying from 18 to 42 aircraft.\textsuperscript{58} Despite these grand proposals, in actuality the whole scheme was plagued by manpower problems as increasing numbers of shipyard workers were siphoned off for front-line duties, while other more important projects always pushed the completion of \textit{Zeppelin} and the auxiliary carriers into the background. Moreover, operationally even if these vessels had been ready to put to sea in 1944 they, like the He 177, would have arrived too late to influence the outcome of the war at sea.

Gearing Up for the Assault

Meanwhile in mid-March 1942, Hitler took up Raeder’s concerns by issuing a directive for the intensification of the war against Arctic convoys. This order was based on the need to weaken the Soviet Union’s powers of resistance and prevent a possible build up of Allied
forces in northern Russia which could facilitate an enemy landing on Norway’s Arctic coast. To this end, a large expansion of Luftwaffe and Navy strength was called for in order to “bring to a stop the enemy’s until now undisturbed merchant traffic between the Anglo-American states and Russia in the Arctic Sea” and the elimination of the enemy’s naval threat in the region. Göring obediently fell in behind Hitler’s wishes and issued an order to Stumpff instructing that the battle against the convoy route to Russia was to be at the “foreground” of Luftflotte 5 efforts, and to carry out this task the air fleet was to work in the “closest” co-operation with the Navy. For the “frictionless” achievement of this goal, Luftflotte 5 was made responsible for maintaining a tightly uniform command and was to guarantee faultless signals communication with the responsible naval commanders in the area. In addition, a simplification of the command structures and the reporting systems between both staffs was to be established. To ensure that both the Luftwaffe and the Navy were fully cognisant of their obligations a conference was to be held and binding agreements formed. The ideal solution, and one favoured by the Navy, was the establishment of a combined command, but with little enthusiasm for this from within the Luftwaffe they had to settle for swapping liaison officers.

Alongside these command considerations, more aircraft were to be transferred into the region. To increase the air fleet’s striking power, 2/KG 30 was to be prepared for their shift to the region and KG 30’s General Staff Officer (Generalquartiermeister) was ordered to accelerate the operational readiness of this force. The scouting forces were to be strengthened by the arrival of one of Aufkl.Fl.Gr 125’s reconnaissance squadrons and for long-range reconnaissance, further Condors of KG 40 were to fly north from France. A corresponding strengthening of the ground organisation was demanded “without delay.”

By late March, Luftflotte 5 had been divided into three main forces: Fliegerführer Nord (Ost) based at Kirkenes, Fliegerführer Lofotens sited at Bardufoss, and Fliegerführer Nord (West) at Sola. The largest of these local tactical commands was Oberst Alexander Holle’s Fliegerführer Nord (Ost). Containing the bulk of Luftflotte 5’s units, this air command was assigned the dual role of supporting the Army on land and attacks on convoys at sea. In addition Fliegerführer Nord (Ost) would, as conditions and forces allowed, raid the Murmansk and Archangel ports. Although the Kirkenes base was home to the greater part of Holle’s forces (2/JG 5, 10/ZG 5, 1/Stk 5 and 1./(F)124), other units were dispersed to Petsamo (5 and 6./JG 5, and 3./KG 26), Banak (2 and 3./KG 30, and 1./(F)22) and Billefjord (1./KüFIKG 125). Fliegerführer Lofotens, under the command of Oberst Hans Roth, did not have any permanent forces under its control, rather units would be
assigned as the situation demanded and at the beginning of the campaign against shipping included only two coastal patrol squadrons, one based at Trondheim (3./KüFlGr 906) and the other at Tromsø (1./KüFlGr 123). At Stavanger, Fliegerführer Nord (West) was assigned the all-important early reconnaissance role and attacks on convoys south of a line stretching from Trondheim westward to the Shetlands and Iceland. In order to carry out these tasks, the force was allocated a reconnaissance squadron and group (1./(F) 22 and 1./KG 40), the latter being made up of Condors, two coastal patrol squadrons (1 and 2./KüFlGr 406) and a weather reconnaissance squadron. The gradual build up had seen Stumpff’s air fleet grow from a paltry 152 aircraft in January 1942 to 175 in February and now, one month later, rested at 221 combat planes.64

The part each of these commands would play in the upcoming attacks was fairly straightforward. Fliegerführer Nord (West) upon being informed by intelligence reports that a convoy was being assembled, would put up its long-distance reconnaissance aircraft in order to scour the ports of northern Scotland and Iceland and the entry points into Arctic waters. Once vessels were sighted, these aircraft and those of the other two air commands were expected to keep constant contact with the convoy. Due to the extremely difficult weather conditions in the region this was not always possible, but should contact be lost a probable course for the convoy was to be plotted based on the last aerial sighting and from this, intensive overlapping reconnaissance flights would be made until it was relocated. Once an assembling convoy had been sighted, all aircraft in the region were themselves assembled for the assault on the Allied vessels as they made their way eastward. The initial attacks would be undertaken by Fliegerführer Lofotens until the convoy crossed a line reaching from the North Cape to Spitzbergen Island. From this point the convoy fell into the range of Fliegerführer Nord (Ost)’s bombers. Fliegerführer Nord (Ost)’s sole objective was the destruction of the convoy and without express orders from Stumpff himself, not a single aircraft was to be used in support of ground forces along the Finno-Russian front while this task remained uncompleted. At this juncture of the operation and in order to maximise effort, the forces under Fliegerführer Lofotens now came under Fliegerführer Nord (Ost)’s command and aircraft based at Bardufoss would successively fly to Kirkenes or Petsamo so that they could take advantage of the closer proximity of these fields to the action as the convoy moved further eastward. The general idea was to hit the convoy continuously from the time it first came within range of the bombers based in the Far North until it docked at Murmansk or Archangel.
Stumpf’s efforts to bring the greater part of these forces to bear from the third week of March until the end of May against the Murmansk-bound convoys (PQs 13, 14, 15, and 16) and those making the return run (QPs 9, 10, 11, and 12) were largely ineffectual, thanks to the weather prevailing over the region in this period. Of the 16 merchant ships sunk en route to the Soviet Union the Luftwaffe accounted for a dozen, while only five of the outward sailing vessels were sunk and of these only two were directly attributable to Luftwaffe action. In all, the Germans had succeeded in sinking no more than 21 out of a total of 166 merchantmen that sailed from Britain and Russia during these months. Indeed, German anti-convoy activity was only marginally more successful in preventing Allied ships reaching their destinations than bad weather, which alone forced 16 of PQ 14’s ships to abandon their voyage.

Attacks on shipping in early April 1942 were thwarted by the spring thaw which wrecked havoc on the northern airfields, while those undertaken in May had to contend with abysmal weather. For example, in accordance with Göring’s 15 March order the Luftwaffe attempted not only to maintain contact with PQ 13 but lead the U-boats to the convoy via a wireless-direction frequency, only to have atrocious weather force contact to be broken off. Difficulties were also compounded by the fact that gales forced the convoy to scatter, making it impossible to locate in the long hours of darkness, at a time when German surface vessels were only just putting to sea and too far from the main area of action. Atrocious weather conditions of this sort greatly frustrated Stumpf’s efforts and meant that attacks on any given convoy had a decidedly half-hearted appearance. Often attacks were undertaken by niggardly formations seldom numbering more than a dozen planes and usually much less. This of course, presented the defending escorts with the opportunity to concentrate their fire on only handful of attacking aircraft which resulted in the shooting down of a number of Luftflotte 5 planes during April and May.

The situation was not altogether gloomy since in these two months the Navy and Luftwaffe had ample opportunity to iron out a number of inter-service problems that would lay a good co-operative framework for action against PQ 17 and 18. By way of illustration, although the Navy’s after-action report for operations against PQ 14 noted that “low cloud cover” had “prevented sustained attacks” by the Luftwaffe, overall co-operation had been “frictionless”, especially between U-boats and aircraft with regards to direction-finding work. Likewise, during the action against PQ 15 and QP 11, Admiral Nordmeer was quick to note that despite the Luftwaffe’s excellent reconnaissance having to be curtailed at times due to the terrible weather, “no difficulties were encountered in the co-operation of
the Luftwaffe with the U-boats and also with the destroyers. It does appear from these entries that local Fliegerführer commanders and their U-boat counterparts had developed an effective co-operative arrangement at a tactical level in the Far North, but as we shall see at a higher level, a yawning gulf still existed between how the Navy and Luftwaffe’s top commands approached larger actions involving surface vessels in the region.

On top of these achievements, the German attacks on PQ 16 (which accounted for half of the ships sunk by the Luftwaffe from April to late May) showed that the gradual build up of strength and improving weather were increasingly tipping the scales against the Allies. The convoy of 35 ships (totaling 200,000 tons), was first sighted on the morning of 25 May about 195 kilometres east of Jan Mayen Island, steaming in an easterly direction. The escort initially consisted of a cruiser, five destroyers and eight other vessels but this was soon supplemented by four cruisers. The first success was made by a U-boat the following day, while the Luftwaffe’s main effort would take place on 27 April, just as Hitler in another fit of Norwegian Paranoia made it known that he expected an immediate attack on Norway and accordingly ordered as many ships as possible “be sent to the bottom, so as to forestall any intended landing.” In obedience to his Führer, Stumpff put the largest formation of German aircraft so far seen in the Far North into the air against the PQ 16, now situated south-east of Bear Island. Flying from the northern Norwegian airfields were not only bombers and Stukas but also the freshly-arrived torpedo bombers.

As noted earlier, the Germans had only taken an interest in utilising aircraft as torpedo-carriers in late 1941, when in December of that year the establishment of such a force was begun with elements of KG 26. In January 1942, squadrons from this bomber wing were sent to Grosseto in central Italy for training, and by May the first units were beginning to arrive in northern Norway. Junkers 88s and He 111s had been found suitable for the low-flying delivery of torpedos and 12 trained crews had arrived at Bardufoss on 1 May to fly KG 26’s torpedo-adapted He 111s, along with 60 more standard Ju 88 bombers as part of the general strengthening of Stumpff’s air fleet.

Supplemented by these new forces, a total of 101 Ju 88s and seven torpedo-carrying He 111s fell on the convoy in a series of well-executed waves. While the Germans suffered relatively light losses (three Ju 88s) the Luftwaffe crews reported inflicting very heavy losses on the convoy. Nine merchant ships, totalling 62,000 tons, were said to have been definitely sunk, while a further six merchant ships, totalling 99,500 tons, were claimed to have suffered so badly at the hands of Luftflotte 5 that they were probably sunk. In addition, 16 more merchantmen were claimed damaged. Thus supplies to Russia from
Britain and America have been dealt a severe blow”, crowed the air fleet’s diary. Likewise, the Naval Staff were rapt with the results, concluding that the “enemy has learnt unmistakably what risks he takes by bringing strong expeditionary forces into the range of the Luftwaffe”. All in all, there was some reason to believe that the whole convoy had been sent to the icy depths of the Arctic Ocean. Yet the blow, although grievous, was not as severe as the Luftwaffe suggested, since in reality only six ships had been sunk by aircraft (five by bombs and one by torpedo) and one merchantman forced to return home due to damage sustained.

Notwithstanding these exaggerated claims and the mistaken belief that the convoy was part of an expeditionary force, of PQ 16’s 35 ships only 27 made it to Murmansk and Archangel, that is, a loss of one-fifth of the convoy. U-boat participation had been slight due to good visibility and constant daylight and they were, therefore, driven off by the escorting warships—and on one occasion by a German dive-bomber—before they could get close enough to attack. Added to the Luftwaffe successes, though, were the valuable lessons learnt in the attacks by bombers and torpedo-bearing He 111s, the latter of which had already sunk three vessels in the their first outing against PQ 15 and one more against PQ 16. As a writer of the war diary of Luftflotte 5 concluded on 1 June 1942, the fight against PQ 16 had demonstrated that the “correct combination of torpedo and diving attacks could bring about special success at the cost of modest losses.”

The general idea was to assault the clustered vessels in integrated high-level dive bombing attacks and low-level torpedo runs, in order to dissipate the fire-power of the defending escorts. The torpedo attacks by the He 111s were made by a formation in wide line abreast which from about 100 metres would simultaneously launch their “tin fish” at the merchant ships. Known as the Goldene Zange (Golden Comb) this method of attack was designed to take place at twilight when the targets would be nicely silhouetted against the sky.

**Air Sea Rescue**

On the negative side, the operations had highlighted for Stumpff the weakness of his air-sea rescue force. Often ignored in air power histories, but very much in the air fleet commander’s thoughts in the days following the final assault on PQ 16, the sea rescue units were an integral and essential component of Luftflotte 5. Working alongside the Navy, local lifeboat societies dotted along the coastline, and ships moving along the coast at any given time, the Luftwaffe’s Seenotdienst (Sea Rescue Service) was charged with the task of recovering ship and aircraft crew from offshore waters. The Luftwaffe’s sea rescue regions
in Norway were broken into two commands: *Seenotbereichs VIII* (Stavanger), incorporating Stavanger, Bergen and Trondheim; and *Seenotbereichs IX* (Kirkenes), which covered Tromsø, Billefiord and Kirkenes. Just as close co-operation with the Navy was required for combat operations, the rescue of either naval or air personnel was dependent on the rapid transmission of information and timely deployment of either naval vessels, or more often than not, the Luftwaffe’s sea rescue service, if the survivors were to be recovered before being claimed by the region’s harsh natural elements. Flying He 59 floatplanes and Do 18 and Do 24 seaplanes, a considerable number of both German and Allied airmen and sailors were rescued by Luftflotte 5’s sea rescue units. From the beginning of the war until 1944, it has been estimated that these air units not only rescued many Germans but 492 Allied aircrew of whom 252 were picked up in 1943 alone.

Despite the increase in aerial activity in the region, OKL, due to the general shortage of available crews everywhere, was not able to allocate more crews for sea rescue forces in Norway. Stumpff, however, tried to force the issue and in a handwritten note to Jeschonnek, the Luftwaffe’s Chief of General Staff, pointed out that the continual deployment of his combat forces against convoys represented a considerable risk since a forced landing in these waters demanded rapid recovery if the men were not to perish in the extremely low temperatures. His crews “must be given a chance of rescue” if morale was to be maintained. Moreover, attacks on “PQ 16 have shown to our great regret”, noted the air fleet’s war diary on 30 May, “that the air sea rescue service available is inadequate for the vast amount of sea area and for major operations.” Yet when it became clear that Jeschonnek was unable to assign more resources to Norway for this purpose, Stumpff took the matter into his own hands by reorganising his coastal reconnaissance units so that during the heat of battle they would be on stand-by to carry out emergency rescue operations. Certainly, this was a good compromise since once the convoy came under assault by Stumpff’s main fighting force, the reconnaissance He 115 floatplanes would play little part in the actual combat phase of the operation. This reorganisation paid off not only for those Germans who were forced to ditch in the Arctic Ocean but their opponents as well. During the operations against PQ 17 the rescue aircraft of *Seenotbereichs IX* (Kirkenes) would recover 34 Allied survivors.

Another problem facing the Luftwaffe in their Arctic endeavours was the growing strength of Soviet air power in the region, resulting in increasingly stiff resistance at the eastern end of the convoys’ passage and in repeated attacks on German airfields. For example, attacks on PQ 16 fell off after 27 May not only because Soviet destroyers joined
the escort force in the final run to Murmansk, but also because Soviet bombers were put above the convoy for added defence and fighters began to appear over the convoy on 29 May.\textsuperscript{82} The increasing numbers of enemy planes in the region can be seen from the German claims for May which ran to 162 aircraft of which 113 were British-supplied Hurricanes.\textsuperscript{83} On 28 May alone, \textit{Luftflotte 5} maintained having shot down 22 aircraft without apparently any loss of its own.\textsuperscript{84} Although these assertions were invariably too high, the growing numbers of Soviet aircraft were a worrying trend for Stumpff who saw his airfields at Petsamo, Kirkenes and Banak regularly coming under attack from enemy bombers and fighters. Forays of this nature were often timed to prevent German aircraft getting off the ground to attack the convoys. For instance, on 29 May alongside attempts to jam the contact and tactical radio frequencies being used by \textit{Luftflotte 5}, the Soviets launched raids with fairly small formations and single aircraft against Kirkenes.\textsuperscript{85} These sort of hit-and-run sorties were, as yet, not hugely destructive but taxed Stumpff’s defensive reserves and made raids on Murmansk increasingly more costly.

\textit{Rösselsprung}

During June, the air fleet’s war diary records that not a single convoy was sighted which was fortunate for pilots and their crews since the weather over this four-week period was particularly unfavourable for operations. Attacks against harbour facilities continued for much of June in the face of an increasing Soviet air power presence. In the background, training and familiarisation with the integrated high dive-bomber and torpedo attack \textit{Goldene Zange} continued unabated in preparation for the next convoy. And all the while the German forces were slowly being built up. By the end of May, Stumpff had a 264-strong force at his disposal. The most potent weapon in the air fleet’s armoury was its strike arm of 103 Ju 88 bombers, 42 He 111 torpedo-bombers and 30 Stuka dive-bombers. For long-range reconnaissance, he could call on eight Condors and 22 Ju 88s. In addition to these Luftwaffe resources, he had at his disposal a further 44 BV 138 seaplanes for reconnaissance and 15 multi-purpose floatplanes.\textsuperscript{86}

For the Navy, the situation in the Far North was particularly frustrating. Ever since the ill-fated deployment of \textit{Tirpitz} against PQ 12, Raeder had been decidedly reluctant to chance his arm with the bulk of the German Navy’s surface force, and especially its prize battleship, until he felt air cover could be assured. Paralysed by this uncertainty and the lack of fuel oil, the German fleet had failed to put to sea at all during the assault on PQ 16, while
previous dashes from the fiords had been restricted to destroyer forces in relatively fleeting tip-and-run raids. Despite, or perhaps more because of this dismal performance, the Navy began planning a major operation utilising the force now dispersed through Norway’s northern fiords, just as a new allocation of 15,000 tons of fuel came through in June.\textsuperscript{87} Since Admiral Rolf Carls, the commanding officer Navy Group North, considered the pocket battleships were decidedly unsuited to operating independently due to their inferior main armament, poor anti-aircraft defences and relatively slow speed which made them particularly vulnerable to either air attack or a major engagement with the Home Fleet, decisive results could only be obtained by bringing all German warships including \textit{Tirpitz} to bear in a future thrust from their Nordic hiding places.\textsuperscript{88}

Raeder agreed and planning was initiated for just such an undertaking, code-named Operation \textit{Rösselsprung} (Knight’s Move). A plan for the operation was prepared by the Naval Staff on 9 June which divided the German surface fleet in Norway into two forces, the \textit{Drontheim-Gruppe} composed of \textit{Tirpitz}, \textit{Hipper} and six destroyers; and the \textit{Narvik-Gruppe} made up of \textit{Lützow}, \textit{Scheer} and another half dozen destroyers.\textsuperscript{89} The main task of the surface fleet was nothing less than the rapid “destruction of the enemy merchant ships”. Certainly, the forces proposed and eventually gathered together for \textit{Rösselsprung} were formidable; \textit{Tirpitz}, wearing Admiral Otto Schniewind’s flag as the Fleet Commander, displacing some 42,000 tons and bearing eight 38-cm guns was more than a match for any vessel the British could put to sea, supplemented by \textit{Hipper}’s 20-cm guns, while both \textit{Scheer} and \textit{Lützow} were well able to dispatch the convoy merchantmen with their 28-cm armament. An engagement, though, with a superior enemy fleet was to be avoided at all costs and the operation was to be completed before the enemy could intervene with its strong covering force lying in the Faroe-Iceland region.

Three U-boats were to be stationed north-east of Iceland and were to act as a trip wire for locating the convoy, while up to four further U-boats were to lie in wait between Jan Mayen and Bear Island. These boats, however, were to shadow rather than attack the convoy, in order to avoid mistakenly torpedoing German warships.\textsuperscript{90} Dönitz would, of course, rather have had his boats all in the Atlantic where targets were more plentiful and away from the continuous daylight in the Arctic which made U-boat action particularly nerve-racking for his crews. To his mind, the “Luftwaffe was more suited to combat convoys in the North during the summer” and he felt it an extravagant waste to use his boats in mere shadowing operations.\textsuperscript{91} The Naval Staff disagreed and wanted at least six to eight U-boats at sea in the vicinity of the convoys at any one time.\textsuperscript{92}
As with the U-boats, the Luftwaffe was to play the role of support force to the operation by maintaining continuous contact with the convoy and determining the strength of its escorting force, and through long-range reconnaissance, locating the anticipated distant heavy covering force in the Shetlands-Faroe-Iceland-Jan Mayen area. As for attacking the enemy directly, the plan stipulated in no uncertain terms that the Luftwaffe was only to assault aircraft carriers and merchant shipping once the surface forces had engaged the enemy. This placed Stumpf’s air fleet in a decidedly secondary role. As all the senior naval officers from the Großadmiral downwards felt that the Luftwaffe’s primary function was reconnaissance not combat, Stumpf’s scouting machines were to enable the surface force to attack and destroy the convoy and return to their Scandinavian bolt-holes without interference from British carrier aircraft or battleships of the Home Fleet. The Navy was certain that they were more than well equipped to deal with the convoy on their own and, moreover, it will be “almost impossible”, reasoned the Navy’s Group North, for Luftflotte 5 “even in good weather, to make adequate reconnaissance flights in addition to carrying out combat missions.” “The sea area is too great” Carls continued:

Such reconnaissance is necessary for accurately determining the position of the probable remote escort consisting of heavy forces, including aircraft carriers and proper employment of pocket battleships is dependent on this knowledge.93

The Navy informed the Luftwaffe’s Operations Staff of their improved fuel oil situation and that this would probably result in an intensification of action against the Murmansk convoys, but—and here was the crux of the message—this would require greater reconnaissance than had hitherto been afforded the Navy. The Naval Staff were, however, aware that this would not sit well either with Göring or Stumpf and wrote a honeyed communiqué couched very carefully to play up Luftflotte 5’s success against PQ 16—though they already knew full well that most of the convoy had actually made it to Russia’s Arctic ports—and stressed the soundness of their request for the sake of Germany’s war effort in the Far North:

The Naval Staff is aware of the fact that increased reconnaissance will inevitably result in a withdrawal of bomber planes, the action of which brought such gratifying results against convoy PQ 16. It feels, however, that such a step is in the common interest and that the increased prospect of success on the part of the naval forces will compensate for the withdrawal of the planes.94

To this end on 8 April, the Navy requested that the Luftwaffe hierarchy make it clear to the commander of Luftflotte 5 that he was required to meet all the requests of the local naval
commanders as much as reasonably possible, even if this meant utilising the air fleet’s bombers in a reconnaissance role.

**Inter-service Infighting and Convoluted Communications**

Placing the Luftwaffe in this decidedly secondary role and at the whim of the Navy, did not sit well with either Göring’s Operations Staff in Berlin or Stumpff in Norway no matter how well presented. The request was promptly refused. “Additional reconnaissance forces cannot be furnished and under no circumstances are bombers to be used for reconnaissance tasks only,” replied the Luftwaffe’s Operations Staff on 10 June 1942. Why should they be forced to play second fiddle by diverting their bombers to reconnaissance missions just to support a naval action? Especially when in the past few months the Navy had hardly set the Arctic ablaze with forceful actions, while the Luftwaffe had been at the forefront of anti-convoy operations such as the recently completed attack on PQ 16. If Luftflotte 5 was to repeat such a success, concluded the Operations Staff, Stumpff’s already weak bomber force had to remain untouched. Thus the Luftwaffe refused to comply.

The festering resentment and frustration harboured by the Navy towards the Luftwaffe is clearly revealed in the bitter and sarcastic war diary entries that followed the refusal. It seemed obvious, at least to naval officers, that the Luftwaffe believed that bombers were all that was needed for operations against convoys. Scathingly, they pointed out that this one-sided point of view “cannot go unchallenged”, because although the success of Stumpff’s force against PQ 16 had been “gratifying”, it needed to be acknowledged that about 25 ships “did reach the port of destination.” “On the other hand” the entry continued, “an operation such as Rösselsprung harbours the possibility of completely destroying an entire convoy if circumstances are at all favourable.”

To further put the airmen in their place, the Naval Staff pointed to Luftflotte 5’s admission that ten enemy aircraft had been able to reconnoitre the berths of German vessels in Narvik on 26, 27 and 28 May unimpeded, in order to ascertain the likely dispositions of surface vessels in Norway. While the enemy was able to this with impunity, mocked the Navy, the Luftwaffe in contrast would not even permit consideration of the request for increased naval reconnaissance. This remarkable diatribe in a normally austere and functionary war diary was an outpouring of the Navy’s long-held frustration at its inability to retain control of its own aircraft or get effective Luftwaffe support in maritime work. The underlying resentment was evident in the concluding remarks of 9 June:
As a result, the Luftwaffe will simply have to acknowledge once more that the RAF is numerically better able to cope with the more or less self-evident fundamental requirements of any sort of naval warfare. This example [of 26, 27 and 28 May] shows with striking clarity a discrepancy which can never be sufficiently regretted, namely the absence of a naval air force or even a certain amount of authority of naval commanders over air forces.\textsuperscript{96}

Raeder’s staff, totally unimpressed, and having tried the nice approach—only to be rudely rebuffed—proposed that the “attitude of the Luftwaffe’s Operation Staff be mentioned to the Führer” since the success of \textit{Rößelsprung} was dependent on good reconnaissance.

This rather pathetic cry for “intervention by the highest authority” was not only an indictment against the failure to adequately equip naval forces with suitable aircraft in significant numbers, but also against the German military system which fostered such corrosive inter-service rivalry. Blotting out this sort of self-defeating in-fighting would have been very difficult in pre-war Germany, given the long-held parochialism of the Army, Navy and latterly the Luftwaffe, and impossible in the white-hot heat of war. Nevertheless, its most pernicious tendencies could have been ameliorated here and elsewhere by the establishment of single theatre commander. Hitler’s brief flirtation with the idea of placing someone of the calibre of Kesselring as Supreme Commander, Norway, would have been equally beneficial in 1942 as when it was first mooted in 1940.

The Führer’s failure to bring this squabbling to an end by establishing a combined Navy-Luftwaffe command structure in Norway was repeated in other theatres and was one of his greatest failures as head of the \textit{Wehrmacht}. In some ways, though, the disunited command structure that existed in all German theatres of war suited his predilection for meddling as the final arbitrator of important and less important decisions that were made daily. In this sense, it meant that he was truly the warlord that Churchill and Roosevelt could never be; but on the other hand, it meant as the war progressed and spread like a cancerous growth over central then western and northern Europe, the Mediterranean and finally the Soviet Union, that his attention was necessarily diluted over far too many regions and often fell only on areas of increasing importance such as the Eastern Front for any significant period of the time. In the end, it took Hitler’s intervention to bring the Luftwaffe to heel.

On 10 June, the Luftwaffe advised the Navy that they would only be able to support the warships with three squadrons of Condors, four squadrons of BV 138s and a relatively small number of reconnaissance flights equipped with a \textit{Kette} of Ju 88s each.\textsuperscript{97} The Navy did not hold out much hope that the Luftwaffe could be coerced into withdrawing bombers for reconnaissance purposes “without intervention by the highest authority.” This feat,
however, was achieved when Raeder met with Hitler on 15 June to discuss Rösselsprung. The Führer agreed with most of its proposals, but was very uneasy about the possible appearance of British aircraft carriers, since he considered them to be a "great threat to the large vessels." Consequently, he was only prepared to approve Rösselsprung on condition that enemy carriers be located before Raeder’s warships left their lairs and subsequently "rendered harmless by our Ju 88 planes before the attack gets under way." Moreover, even if any carriers lay beyond the range of Stumpff’s units the attack remained "subject to the Führer’s approval." These caveats on the intended enterprise as envisaged by the Navy would prove to be its death-knell because they tied the hands of every flag officer in the long and tortuous chain of command that ran from Otto Schniewind aboard Tirpitz in Trondheim, up to Schmundt as Admiral Nordmeer in Narvik, through Carls in Wilhelmshaven, and finally on to Raeder at the apex of power in Berlin.

Compounding the lengthy channels of communication present within the Navy were the rather tortuous and disjointed communication links existing between the two services in the region. As observed earlier, on a tactical level the local Luftwaffe officers had developed a good rapport with their naval counterparts, but when it came to larger scale operations the pressures brought about by inter-service rivalry were further strained by the nature of the communications system prevailing over the whole country. Since the Germans were fully aware that their wireless traffic could be intercepted by the enemy, they were compelled to use incredibly long land-lines stretching the entire length of Norway for the much slower coded teleprinter signals.

The difficulties of this method can be readily appreciated when examining the Luftwaffe’s position. For example, a reconnaissance report from Fliegerführer Nord (West) at Stavanger had to be sent to forward headquarters at Kemi, and thence over thousands of kilometres of rough terrain to the main headquarters in Oslo. The data received would be analysed and prioritised before eventual dispatch by teleprinter signal back up the centre of the country to Admiral Nordmeer, Hubert Schmundt in Narvik, from where the relevant material had to be dispersed through the Navy’s own meandering communication channels. Consequently, it is unsurprising that a good number of important signals would only reach the respective naval commanders’ desk long after it was possible to make use of the material, no more so than in the case of PQ 17. Although the Navy played with the idea of transferring Admiral Nordmeer and a small staff from Narvik to Banak to shortcut the system, the move was deemed impractical. It should be mentioned that Admiral Nordmeer had been transferred recently to Narvik in order to improve the situation, only to
make matters worse by creating yet another link in the communication chain.102 In reality, what was needed was the establishment of a combined services centre under the leadership of a single theatre commander—this would have made it possible for the Germans to get the best out of their forces in Norway.

Nevertheless, the Navy had won a rare victory over the Luftwaffe and Göring was compelled to have his forces comply fully with naval requests. As the Naval Staff gloated, the order issued by the Luftwaffe’s Operations Staff now actually exceeded their initial demands and if weather permitted, “should suffice to prevent any surprises.”103 The solution was somewhat of a compromise, since Stumpff’s bomber forces would still not used for reconnaissance, but OKL was forced to transfer in additional suitable types for naval demands on 23 June.104 Luftlotte 5’s operational orders for Rösselsprung directed Stumpff’s scouting units to reconnoitre an area extending some 480 kilometres north from the Norwegian coast or as far the ice barrier, as thoroughly as possible.105 The organisation of the flights was to be made in such a way so as to ensure that any given area was flown over every four hours. In addition, the movement of the two German surface forces into the area of battle was to be overseen by escorting fighters as a precautionary move should Allied aircraft threaten the safe passage of these irreplaceable ships.

While this inter-service wrangling had been taking place back stage, German intelligence was pointing to a slow accumulation of escort and convoy vessels at the western end of the convoy route. In addition to photo-reconnaissance during the last few days of May, which identified a large contingent of British and American warships at anchor in Scapa Flow, including three battleships, three heavy cruisers, four light cruisers and twenty-two destroyers, agent reports buttressed by Luftwaffe reconnaissance revealed that more warships, including an aircraft carrier, were lying in wait off Iceland. These reports were soon followed in early June by others revealing the gathering of merchantmen on Iceland’s southwest coast.106 With what looked like the gradual formation of a convoy, Schmundt ordered his first three U-boats (U 251, U 376 and U 408) designated Eisteufel (Ice Devil) into the Denmark Strait to sweep the region in anticipation of PQ 17.107

In reality, Eisteufel would have to wait longer than expected for the convoy to breach its observation zone. It was not until 27 June that PQ 17 began filing out of Iceland’s Hval Fiord “like so many dirty ducks”, observed a crew member aboard one of the escorts, “they waddled out past the nets and out to sea.”108 Underneath their unkept and bedraggled appearance, however, the 35 ships were packed to overflowing with weapons of war for Stalin: 297 aircraft, 594 tanks, 4,246 trucks and gun carriers and over 156,000 tons
of general cargo. Should this precious material ever reach Russia’s Arctic ports it would equip an army of 50,000 men.\textsuperscript{109}

The Allies, though, had been informed by their intelligence services of German plans for a heavy surface forces attack east of Bear Island, an area in which *Tirpitz* and her sisters could wreck havoc under the protective umbrella of around the clock air cover from relatively near the Norwegian coast. The only hope the British had of thwarting such an enterprise was to lure the German fleet westward into the vicinity of the powerful Home Fleet. Under the command of Admiral Sir John Tovey, it was positioned as a distant cover force north-east of Jan Mayen Island in the rather forlorn hope that Allied submarines off the Norwegian coast would intercept the German warships as they moved into attack. Medium range support for PQ 17 would be provided by a covering force of four cruisers and three destroyers under the control of Rear-Admiral Louis Hamilton, operating from a position north of the convoy route until PQ 17 passed what was considered the danger zone for an enemy surface attack, whereupon it would then turn for home. It was envisaged that Hamilton’s cruiser force would not proceed beyond Bear Island or at the furthest, the meridian of 25° East.\textsuperscript{110} Close support for the convoy against Luftwaffe and U-boat attacks all the way to Russia was provided by Commander Jack Broome’s force of six destroyers, four corvettes, three minesweepers, two anti-aircraft ships, and four trawlers. Clandestine support came in the form of two submarines which were to remain hidden until such time as an attack was made by German warships, at which point they were to counter-attack the enemy vessels.\textsuperscript{111}

Certainly the whole situation looked as though it were designed as a trap with PQ 17 the unfortunate live bait. Yet the plan, which if successful would have brought the two powerful protagonists together in a major naval show-down, was contingent on Raeder’s forces attacking the convoy west of, or very near to, Bear Island. Should a major attack by German surface forces occur here, the Allies’ extremely strong distant and cruiser covering forces would do their best to ambush the *Tirpitz*-led raid. However, should a major German attack take place once the cruiser force had departed and the convoy was well beyond the range of the Home Fleet, the Admiralty’s instructions ominously directed that “circumstances may arise in which the best thing would be for [the] convoy to disperse with orders to proceed to Russian ports.”\textsuperscript{112}
The Assault Begins

Although British naval forces were sighted off Iceland on 28 June, bad weather and poor visibility prevented another sighting until 1 July when a high-flying Condor spotted the convoy. The report, though, would not reach Schmundt for at least ten hours. The Eisteufel soon picked up the convoy 95 kilometres east of Jan Mayen Island and was joined subsequently by other U-boats who took up shadowing positions behind the convoy. On 2 July, the first probing Luftwaffe attack was made by seven He 115s carrying torpedoes but one of the floatplanes was shot down and the rest forced to retire without hitting a single ship, due to the ferocity of the anti-aircraft barrage put up by the escort. Late the next day, another seven He 115s took off to assault the convoy and on this occasion a quick attack by one of these aircraft caught the defenders napping. The Liberty ship Christopher Newport was hit in the early hours of 4 July and after failing to scuttle the ship, she had to be left behind for the prowling U-boats to finish off.\textsuperscript{113}

Reconnaissance once again picked up PQ 17 on 4 July and a much larger attack by Stumpff’s forces was mustered against the convoy. Since the Navy was still uncertain as to the exact location of the Allies’ aircraft carrier by this stage and thanks to aerial reconnaissance had been made aware of Hamilton’s northern covering force (which was reported incorrectly to include a battleship), it was as yet reluctant to chance its arm.\textsuperscript{114} Therefore, Stumpff decided to launch his bombers against the convoy while it still remained within effective range of his bases. The initial strike by torpedo-carrying floatplanes was thwarted by 300-400 metre high cloud-cover cloaking the convoy and after an hour-long search was abandoned in the face of the escorts’ heavy defences. By now, the Germans were aware that the formation adopted by the convoy consisted of 38 ships arrayed in column in line abreast, protected from frontal and flanking attacking attacks by PQ 17’s destroyers and light escort vessels and planned their major raid accordingly.\textsuperscript{115} To distract the defensive fire, a small force of Ju 88s were to dive on the convoy moments before KG 30’s 23 He 111 torpedo-bombers split into two groups, one making a low-level beam attack while the other undertook a run from the stern quarter against the convoy. The Ju 88’s diversionary flight, however, failed to materialise in the face of intensive defensive fire and the assault was left to the 23 Heinkels. At 0820 the low level run began. The first wave of ten bombers was met by a murderous hail of anti-aircraft fire at a height of about only 20 metres as it pressed on to the bow of the convoy. One aircraft was quickly dispatched and many of the others panicked, releasing their torpedoes while well outside optimum range before turning tail. The second wave approached the convoy’s stern and nine were able to
launch their torpedoes within range. While five of these then pulled away, four continued to
hurtle towards the core of the merchantmen, passing through the outer protective screen.
Everything the escorts and merchantmen had in the way of defence was thrown against the
intruders in a cacophony of rockets, 10-cm guns, and machine guns of various calibres. Led by *Leutnant* Hennemann, the Heinkels struck three ships, two fatally and within five
minutes the attack was over. The German assault had cost them three He 111s, one of
them belonging to Hennemann, who was posthumously awarded the Knights Cross for his
gallantry.

The defensive fire of the convoy had proved more than a match for Stumpff’s air
units now limping back to Banak. Although the convoy had to abandon the Liberty ship
*William Hooper* and British merchantman *Navarino* thanks to two crippling torpedo hits—at
the time *Luftflotte 5* claimed five vessels sunk and five heavily damaged—it had shown
that if vessels all combined behind a cordon of escorting warships, they stood a more than
an even chance of fending off the Luftwaffe’s best. To Broome, and Hamilton whose
cruiser force had moved into view when the aerial attack began, it appeared that if the
convoy kept together it should be able to repel Luftwaffe attacks without incurring
substantial losses. Meanwhile, decisions in London were about to change all this, turning
the situation decidedly in Stumpff’s favour.

**Convoy is to Scatter and Cold Feet**

The Admiralty, already fretting about the possibility of a major German attack on the
convoy, was uncertain as the whereabouts of enemy ships. Decoded signals remained
inconclusive and at 0830 on 4 July, just as Hennemann’s aircraft ploughed into icy Arctic
waters, Admiral Sir Dudley Pound, First Sea Lord, called together his senior officers to
examine the situation and decide whether the convoy should continue on its present course
or scatter. Already ill with a brain tumour that would claim his life the following year,
Pound personally drafted the order for the convoy to scatter. Broome received it with
dismay, but duly passed on the order since he was sure that it meant an imminent attack by
the German surface fleet. As if to confirm this, Hamilton’s cruiser force withdrew heading
south-west in accordance with his earlier orders, but for all intents and purposes looking as
though it was *en route* to engage the enemy. With the convoy scattering, Broome decided
to follow Hamilton in anticipation of tackling the German battle group.

In actual fact, the Germans were as uncertain as to what was happening as the
British. On 4 July, the German Naval Staff were still under the impression that Hamilton’s
cruiser force might include a battleship and that the sighting of two torpedo-bombers meant that there was a carrier in the vicinity. Although the two “torpedo-bombers” were in reality only a couple of catapult-launched floatplanes, the jittery Naval Staff concluded that the presence of a “heavy force in the vicinity of the convoy makes it impossible to carry out operation Rößelsprung” until such time as dispatched Luftwaffe and U-boat forces had achieved their desired effect on the enemy’s heavy vessels. It was not until the next day that the Navy learnt that the British fleet was withdrawing. With this news, the go-ahead was finally given for the big ships to proceed with Rößelsprung. Eager for battle, the warships set a course for convoy. Expectancy soon turned to doubt, however, when they were spotted by a Russian submarine and a British aircraft. Raeder was racked with unease; could the Home Fleet and a carrier still be in the area and this plane and submarine merely part of their scouting force? In the end, tied by Hitler’s express order that “the fleet should not venture a thrust unless the enemy carrier has been located and eliminated”, he got cold feet and ordered his ships to return. It was a bitter blow to the naval officers and crew, and Schniewind could not help but take a swipe at the Luftwaffe, repeating the Navy’s old complaint:

I see the reasons for this as being a certain degree of understandable hesitancy in the Luftwaffe to divide their own limited forces available, and to detach reconnaissance planes to shadow enemy heavy forces, particularly when there is a carrier in the vicinity. Once again we see the great disadvantages we labour under, lacking as we do our own Fleet Air Arm.

Naval gripes could not, however, cover up the fact that Raeder was strongly wedded to the idea of a “fleet-in-being” and was not about to risk his remaining precious ships unless he was absolutely certain of success; this was a certainty the Luftwaffe could never guarantee, no matter how many aircraft they devoted to the task, given the barrier weather posed to spotting ships at sea and even in getting airborne from fog-bound northern Norwegian airfields.

On the whole, though, in spite of dreadful weather conditions the Luftwaffe had done a more than adequate job in securing information about enemy dispositions. On the day that the decision was made to recall the big ships, Fliegerführer Lofotens had reported that as of 1004 no enemy was sighted under “good visibility conditions between 14° and 26° E up to the ice barrier”; in other words, revealing that Hamilton’s northern covering force had departed. Göring, never one to miss an opportunity to stick the boot in, appeared incredulous as to the reason for the Navy’s hastily-aborted sortie and made rumblings about putting the Führer into the picture regarding Raeder’s excessive cautiousness.
Schniewind had been a little unfair regarding Stumpff’s efforts, he was prepared to concede that the Luftwaffe and U-boats had worked in well together and that during their brief sortie the heavy surface forces did get adequate air cover. Still, he would have preferred that the two tactical headquarters of the respective services be closer together—an admirable aim, though still short of the single theatre commander really needed. Notwithstanding these grumblings, with the abandonment of Rösselsprung it was left to Stumpff’s air units and the U-boats to pick off the now practically defenceless ships scurrying towards Russia.123

On 5 July, Luftflotte 5 found the convoy scattered, with individual ships sailing on the edge of the northern ice belt and faster vessels heading for the cover of severe weather to the east. Naturally, but wrongly, Stumpff concluded that the breaking up of the convoy had been due to his bombers’ efforts the preceding day and was determined to complete the task. Aerial reconnaissance and U-boat reports determined that the bulk of PQ 17 still lay within a 60 square-kilometre area stretching up to 200 kilometres from north to south and it was upon these hapless vessels that Luftflotte 5 and the U-boats fell. Although the air fleet would eventually claim the bulk of the sinkings, in fact a good many of the ships sent to the bottom were victims of combined efforts.

The Main Event

Early on 5 July, U 334 dispatched the abandoned Navarino and William Hooper, both of which had sustained fatal damage the previous day at the hands of the Luftwaffe. These actions were soon followed by U 706 sending Empire Byron to the bottom with a load of Churchill tanks destined for the Red Army. U 88 hit an American freighter Carlton at 0945: her crew abandoned ship and most of them were recovered by German aircraft of the Seenotdienst.124 U 88 then found Daniel Morgan and Fairfield City at the same time as KG 30 Ju 88s were making attacks on these vessels at about 1500.125 Fairfield City was bombed and sunk, while five further Ju 88s soon caught up with Daniel Morgan about mid-afternoon and brought her to a halt with a near miss. The stricken ship was then finished off by U 88, which then joined in an attack on Homomu, sinking her after the crew had abandoned ship. The 7,000 ton Earlston was found by more of Stumpff’s bombers who, with another near miss alongside the engine room, forced the crew to abandon the explosive-laden merchantman. To the crew’s amazement, as soon as they left their vessel three U-boats surfaced to sink her. Among these boats, U 334 suffered the indignity shortly thereafter of being attacked by a Ju 88 which apparently mistook it for an Allied submarine.
Fortunately, the bomber only had enough bombs for a single run before completing the attack with a relatively harmless strafing run.\textsuperscript{126}

Nevertheless, the initial damage sustained by \textit{U 334} was considerable and with the steering damaged and unable to submerge, Schmundt ordered \textit{U 456} to escort the stricken boat back to Kirkenes.\textsuperscript{127} The Naval Staff were far from impressed, and \textit{Luftflotte 5} later carried out an investigation into the incident. Stumpff failed to find the culprit and the Luftwaffe even went so far as to suggest that the attack might well have been made by a Russian aircraft resembling a Ju 88. The Navy, though, strongly dismissed this notion, since the U-boat had observed the attack by Stumpff’s aircraft on \textit{Earlston} only 20 minutes before their own close call and not a single Russian aircraft had been sighted in the region.\textsuperscript{128}

Having completed their rescue recovery duties as devised by Stumpff, the aircraft of KüFILGr 906 resumed the attack with torpedo runs against \textit{Peter Kerr}. Although this American ship, over a two-hour period, successfully evaded nearly a dozen torpedoes launched against her by the slow He 115 floatplanes, Ju 88s led by \textit{Hauptmann} Willi Flechner’s KG 30 unit appeared at 1700 and scored three direct hits amidst a string of near misses.\textsuperscript{129} At about the same time as \textit{Peter Kerr} went down, Ju 88s attacked \textit{Washington} which was part of a trio of ships (including \textit{Bolton Castle} and \textit{Paulus Potter}) which had stuck together following the order to scatter. Near misses added to damage sustained earlier, but she was not sunk until 1730 when several more of the Junkers bombers appeared to conclude the matter and then dealt to \textit{Bolton Castle} and \textit{Paulus Potter}.

Following this cluster of three doomed ships was the slower \textit{Olopana}, which had avoided attack by an ingenious ruse incorporating a fake abandonment and on-board fire. When \textit{Olopana} finally steamed into view, the bedraggled survivors of \textit{Washington}, \textit{Paulus Potter} and \textit{Bolton Castle} were decidedly unwilling to be rescued, preferring days adrift in the safety of their lifeboats than the risk of boarding another unarmed merchant ship in these conditions. As the captain of \textit{Olopana} reported afterwards:

The \textit{Olopana} headed in the direction of the vessels burning on the horizon, to pick up survivors. The \textit{Washington}’s boats were the first encountered; but the crew were so badly shaken up that another session of dive-bombing was the last thing they desired.\textsuperscript{130}

The massed attack on the trio had been made possible by the lifting of fog over northern Norway’s airfields, which meant that all three of KG 30’s squadrons totalling 69 Ju 88s were now able to prowl the entire area, remorselessly hunting down the convoy’s remnants.\textsuperscript{131} At 1730, four of these Ju 88s came across a cluster of vessels making for
Novaya Zemlya in search of refuge. They included the convoy’s oiler Alkersdale, the Royal Navy minesweeper Salamander, a British merchantman, Ocean Freedom, and lastly one of the two rescue ships, Zamalek. Demonstrating the effectiveness of even this motley group when combined defences were put into play, the first three bombers broke off their attacking dives dropping their loads harmlessly wide of the defiant ships. Only the fourth aircraft pressed home its attack, scoring a near miss on Alkersdale’s engine room; the buckled hull plates soon split with a rush of water amidships, forcing her evacuation. At the same time as these eastern sorties were being undertaken, a more northern sweep spotted Pankraft. Loaded with aircraft parts and a deck full of bombers, the American freighter was edging her way along the ice barrier when at 1700 a Condor guided three Ju 88s into an attack. Stacked with over 5,000 tons of TNT, she was soon left to the ice by the crew after a high-level bombing attack. Following a strafing run, Pankraft was eventually set alight by incendiary shells. At 2230, the day’s final success was claimed by U 703, which sank River Afton, also skirting as close to the ice shelf as possible in the hope of hiding in the prevalent fog banks.

Although the next few days saw less frenzied sorties, Stumpfi’s air fleet, along with Schmundt’s U-boats, continued to wreck havoc on the dwindling convoy in a similar manner to 5 July’s spectacular successes. Significantly, Stumpfi found that the torpedo bombers were less useful in attack on widely-dispersed individual vessels than against clustered ships in convoy station and due to bad weather, combined bomber and torpedo-bomber operations were not continued after the abortive 4 July attempt. Thus most of the damage was inflicted by the ubiquitous Ju 88 and by the evening of 6 July even the German Naval Staff had put their complaints aside, confessing:

This is the biggest success ever achieved against the enemy with one blow—a blow executed with the exemplary collaboration between Luftwaffe and submarine units. . . . In a three-day operation, fought under the most favourable conditions, the submarines and the Luftwaffe have achieved what had been the intention of the operation Rößelsprung, the attack of our surface units on the convoy’s merchant ships.

Poor weather over the three days from 6 July to 9 July limited the Luftwaffe’s contribution to a single hit on Pan Atlantic which sent the ship, laden with tanks, steel, nickel, aluminium, foodstuffs, two oil stills and cordite, sky high. Most of the kills in this period were made by U-boats. Nevertheless, Stumpfi’s air fleet still had one throw left and when perfect flying weather reappeared on 10 April, his aircraft brought the operation against PQ 17 to a glorious end for the airmen in the Far North.
A small surviving group of four merchantmen—escorted by a couple of PQ 17's anti-aircraft ships, three minesweepers and three trawlers—having found their way into the Kara Sea barred by ice, set a course south for Iokanka on the Kola Peninsula. Approaching midnight on 9 July, the convoy had been forced south-west by an ice barrier towards German airfields. The ships were soon under surveillance by two BV 138 seaplanes who kept well out of the range of the anti-aircraft escorts, but duly sent out homing signals to draw in the U-boats and Stumpff's bomber units. The conditions were ideal for aerial action. As one of the commanders of the U-boats signalled in, even at this late hour there was plenty of daylight available, with the sun just above the horizon, very little wind, and at least 30 kilometre visibility. For those manning the ships this was one last desperate lunge for the Russian coast only 95 kilometres away, with Murmansk a further 130 kilometres distant.

At Banak, 38 Ju 88s were scrambled and fell upon these unfortunates just before midnight. The first casualty was an American freighter Hossier. Near misses had opened up some of her seams and the chief engineer determined that the ship could not continue, leaving the captain no alternative but to order the ship abandoned. Still on an even keel, the German pilots continued to bomb Hossier, but eventually a U-boat finished her off. Meanwhile, the Ju 88s continued their attacks on the departing convoy as it steamed south. Flying out of a low sun, the aircraft were particularly difficult to spot, while the anti-aircraft ships had nearly expended their complement of ammunition. Over four hours, the Luftwaffe sank one freighter and scored a number of near misses on El Capitán and the rescue ship Zamalek. The final knockout blow for El Capitán was not delivered until about 0600 the next morning, when three bombs from a lone Ju 88 struck near the engine forcing the abandonment of the crippled vessel. Of the returning aircraft, the second squadron was able to return to Banak but the first was forced to land at Petsamo as fog shut down the former airfield.

By this stage, the Luftwaffe was convinced that the "surviving ships of the convoy trying to reach Iokanko were annihilated" and were surprised to receive reconnaissance information that 190 kilometres east of Murmansk were two merchant ships. Without hesitation, 16 more Ju 88s from KG 30 and its experimental squadron took to the air from Banak. Hits were claimed by these aircraft and another mission was undertaken by 18 Ju 88s from KG 30's second group, again from Banak. However, by this time the Soviets were prepared to meet the bombers with Petlykov Pe-3 twin-engine fighters and Hurricanes and the German planes were fought off. Notwithstanding this setback, crew reports
boasted that those ships "not sunk have been so badly damaged that their destruction can be claimed for certain." "According to available figures, it is correct to assume that not one ship of PQ 17 reached a port," concluded the entry in Luftflotte 5's diary for 10 July. With this, the air fleet's operations against PQ 17 were brought to an end. Two days later, Stumpf reported to Göring by teleprinter:

_Herr Reichmarschall!_ I beg to report the destruction of Convoy PQ 17. During reconnaissance made on July 10, 1942 in the White Sea, the western passage, the Kola coast, and the sea area north of the coast, not a single merchant ship was observed. Photographic reconnaissance of Jokanga showed that no ship belonging to PQ 17 has reached that harbour. I report the sinking by Luftflotte 5 of: one cruiser, one destroyer, two escorts, totaling 4,000 tons and 22 merchant ships, totalling 142,216 tons.\(^{141}\)

Although Stumpf's claims were typically exaggerated, his air fleet had indeed played a significant part in the destruction of two-thirds of PQ 17. Of the 24 merchant ships lost, eight vessels—totalling 40,376 tons—were sunk by aircraft, and a further eight (totalling 54,093 tons) were damaged by aircraft and finished off by U-boats.\(^{142}\) The remaining eight (48,218 tons) fell solely to U-boat action. In achieving their considerable and exceptional success, the Luftwaffe had expended 210 kilograms of high explosives and 61 aerial torpedoes in over 200 sorties and lost up to a dozen aircraft.\(^{143}\) Thanks to the combined aerial and U-boat effort, Stalin's forces would never see the 210 aircraft, 430 tanks, 3,350 vehicles and a little over 100,000 tons of munitions, explosives and raw materials which now lay strewn across the bed of the Barents Sea—enough material to equip an entire army.\(^{144}\)

**PQ 18 and the End of Luftwaffe Ascendancy**

The battle against PQ 17 was the high point of Luftwaffe operations against the Arctic convoys. It was not until mid-September that another convoy sailed and severely chastened by the PQ 17 débâcle, the British were determined not to repeat their mistakes. The 40-strong convoy (PQ 18) was accompanied all the way to Russia by a so-called Fighting Destroyer Escort made up of 19 destroyers plus additional corvettes, minesweepers, trawlers, anti-aircraft ships, submarines, and a Carrier Force comprising the escort carrier _Avenger_ with a complement of 12 Sea Hurricane fighters, three Swordfish anti-submarine aircraft and two dedicated destroyers. Additional air cover would be provided by the transfer of some of Coastal Command's seek and strike planes and crews to northern Russia.\(^{145}\) The Fighting Escort Force would provide escort for PQ 18 right into the Barents Sea at which point it would link up with the returning convoy QP 14 on its way west. With
this kind of protection, Stumpff’s forces were in for a torrid time, even with the recent arrival of more aircraft, including Ju 88 torpedo-bombers.

Due to poor weather, the convoy was not picked up by Luftwaffe surveillance until 12 September.\textsuperscript{146} The first of four Luftwaffe raids was made the following day in which the \textit{Goldene Zange} was used successfully for the first time.\textsuperscript{147} KG 30 and KG 26 bombers and torpedo-bombers flying from \textit{Fliegerführer Lofoten} and \textit{Fliegerführer Nord (Ost)}’s airfields sunk eight ships in attacks from 1500 to 2035, and after some less than dramatic half-hearted attempts, He 115 floatplanes delivered a couple of torpedo runs.\textsuperscript{148} Though four Hurricanes were lost, new defensive measures adopted by the British were successful in bringing about the loss of five of Stumpff’s aircraft. Further attacks on 14, 15, and 18 September followed, directed—at Göring’s behest—against the carrier. Although a further five ships were sunk, the establishment of a continual aerial patrol over the convoy and determined escort defensive fire started to cut deep into \textit{Luftflotte 5}’s forces. Over the two days 13 and 14 September alone, KG 26 lost 20 aircraft and 14 crews.\textsuperscript{149} Despite Göring’s demand on 17 September that “the battle against PQ 18 is to be continued with all available means until entered port” and that the destruction of the “ships in this convoy is of decisive importance”, by the next day KG 26 was only able to put a dozen of its original 92 torpedo-bombers into the air, such was the savage mauling received at the hands of anti-aircraft fire and the Hurricanes.\textsuperscript{150} Finally, deteriorating weather and the arrival of Pe3 fighters over the convoy brought an end to the Luftwaffe’s participation against the convoy.

At the conclusion of the operation, the Luftwaffe, in over 330 sorties, had contributed to the sinking of 13 ships of which ten were direct victims of air action.\textsuperscript{151} The cost had been extremely high and during the entire operation against PQ 18, \textit{Luftflotte 5} lost 44 aircraft of which 38 were torpedo-bombers. As the RAF’s post-war analysis of the operation concluded, the British escorts had proved more than a match for the Luftwaffe:

It was found that not only was it impossible to approach the carrier to launch an effective attack—on account of fighters—but that a wide screen of warships made the launching of torpedoes against the inner merchant vessels an extremely hazardous undertaking.\textsuperscript{152}

Nevertheless, despite these losses, the experiences of KG 26 in Norway had confirmed the effectiveness of aerial torpedos in maritime warfare. Ten of the thirteen ships destroyed were the victims of torpedoes delivered by KG 26. Of the 860 sorties flown by Stumpff’s aircraft against PQs 16, 17 and 18, over 340 were made by torpedo-bombers. German assessments of these operations confirmed that the torpedo bomber was the most efficient means of knocking out enemy merchantmen. The Luftwaffe’s \textit{8th Abteilung} calculated that
while only one vessel was sunk for every 19 bombing sorties undertaken, torpedo missions sank an Allied vessel every eight sorties; that is, they were on average twice as effective as high-level or dive-bombing attacks and one-quarter of all the torpedoes launched struck home.\footnote{153}

In many ways convoys PQ 17 and PQ 18 represented the changing fortunes of the German effort at sea and the role of air power in this environment. PQ 17, for its part, represented “what might have been” in the siege of Britain much earlier in the war, when heavily-escorted convoys were far from the norm and very little air cover was available. Prior to 1942, the Germans had their best chance through using bases in France and Norway to combine U-boats and long-range maritime aircraft in achieving a stranglehold over the British Isles. Although the Germans now—in 1942—finally had some torpedo-bombers, they had needed them in 1940-41, in advance of the establishment of a complete interlocking convoy system, a Mid-Ocean Escort Force, the increasing use of specialised long-range aircraft and much more effective anti-submarine measures. As PQ 18 had demonstrated, by September 1942 the opportunity for the Germans to bring about the capitulation of Britain had well and truly passed. How further operations against the convoys would have gone we will never know for certain, because events in another theatre were about to turn Norway once again into an operational backwater.
Chapter 7
Luftflotte 5's Slow Death 1943-45

From 1942 on, air support, both reconnaissance and fighter protection for the naval bases was inadequate in the area of Norway. Vizeadmiral Otto Schniewind, 1945

Operation Torch, the Allied landings in North Africa in November 1942, saw four wings of bomber and torpedo-bombers transferred from northern Norway to the Mediterranean. As in early 1941 with the assignment of Geisler’s X Fliegerkorps to this southern theatre, Luftflotte 5 was once again gutted of its strike force; the remaining dregs included the slow He 115 which proved entirely unsuited to anti-convoy work and Stukas which were notoriously vulnerable to the Allies’ single-engine fighters. In the months and years that followed, the northernmost air fleet would receive some reinforcements but never on a commensurate level with Allied activity in the region.

Not that the Navy’s effort in the following years was particularly glowing. Having somewhat mollified Stalin with earlier efforts and the proposed North Africa landings, Churchill suspended the Arctic convoys until the end of the year when the first in a newly-titled JW eastbound and RA westbound series began, starting with JW 51A in the second week of December 1942. This group of merchantmen passed unseen by the Germans—an indication of the declining abilities of Luftflotte 5—but the next voyage would bring about the demise of the Navy’s Commander-in-Chief. Lützow, Hipper and five destroyers left Alta Fiord on 30 December in search of JW 51B, but were able to bring their guns to bear on the ships only briefly before being forced to disengage upon the appearance of British cruisers, which damaged Hipper with their very first salvo. For Hitler, who was hoping for a victory in Arctic waters to counter the disasters looming at Stalingrad and in North Africa, this was the last straw. In a heated diatribe, he detailed to Raeder the dismal performance of the German Navy since 1866 and when he declared his intention to scrap the big ships, Raeder felt compelled to resign in favour of Dönitz. As the Navy’s new leader, the ex-submariner Dönitz was able to get the Führer to rescind his order to have all vessels larger than destroyers scrapped, at least as far as the ships in Norway were concerned; those spared included not only the battleship Tirpitz and pocket battleship Lützow, but also the battle-cruiser Scharnhorst which arrived in March 1943.

In many ways, the decision not to break up the big ships was a vindication of Raeder’s belief in the “fleet in being” which, although never materially threatening the
convoys, weighed heavily on the British Admiralty. The mere presence of these warships in northern Norway posed enough of a menace in the minds of the Royal Navy to constrain them to retain a disproportionately strong force at Scapa Flow centred on battleships and, when possible, a fleet carrier. Only with this kind of Home Fleet did the British feel they could counter any moves made by the German ships, especially *Tirpitz*, such as an unexpected strike at a passing convoy or a break-out into the Atlantic. In turn, this limited the amount of forces available to the British for perhaps more important areas including the Atlantic proper, the Mediterranean, and the Pacific. For Dönitz though, his warships still had unfinished business in the region.

Prior to taking up the Navy reins, Dönitz had not been favourably disposed to a further employment of the big ships in Norway, but had slowly come round to the view that given the right conditions they still could be committed to battle. Soon after his appointment, he laid down the conditions for such an action in a directive to the respective officers in command of the surface forces:

The conditions required for successful operations by surface ships against traffic in the Arctic will occur very seldom, since the enemy, to judge from past experience, will deploy for the protection—immediate and indirect—of his convoys, forces of such strength as will undoubtedly be superior to that of our own forces. Nevertheless, there may occur opportunities for attacking unescorted or lightly-escorted ships or small groups sailing independently. Whenever such an opportunity occurs it must be seized with determination, but with due observance of tactical principles.

By March 1943, Dönitz had *Tirpitz* and *Scharnhorst* with their respective destroyer flotillas in northern Norway. In the meantime, the British had suspended convoy sailings over the summer months in order to prevent a repeat of the disasters of 1942, and also because the tide of battle on the Eastern Front had well and truly turned against the Germans with the destruction of the German Sixth Army at Stalingrad. Consequently, it was no longer imperative to push supplies through to the Soviets regardless of cost. With no opportunity to attack convoys, the German vessels took part in a morale-boosting foray against enemy port installations, coal mines and weather stations on Spitzbergen. This operation, undertaken on 6 September 1943, rekindled British concerns about the presence of *Tirpitz* and hastened a Royal Navy operation to send six midget submarines into the big ship’s lair later that month. Two of these managed to sneak past the defensive nets and lay mines which successfully damaged *Tirpitz*’s steering and propeller shafts, effectively putting the ship out of action for at least six months. Despite the loss of *Tirpitz*, Dönitz was determined to attack at the first sign of renewed Arctic convoys.
Reconnaissance

To support a Scharnhorst-led incursion into northern waters, the Navy was only all too well aware of the Luftwaffe’s declining ability to provide even the most perfunctory of reconnaissance sorties, let alone air cover for the duration of any major operation undertaken. Although Vizeadmiral Schniewind’s post-war assessment of Luftflotte 5’s performance from 1942 was typically, and somewhat unfairly, critical of the Luftwaffe’s inability to support the Navy adequately, his assessment neatly summed up the situation in Norway after the removal of most of Luftflotte 5’s force in November of that year:

From 1942 on, air support, both reconnaissance and fighter protection for the naval bases was inadequate in the area of Norway. Air reconnaissance of Murmansk convoys was always weak and often late, while air cover at times didn’t appear at all, or lost contact with the convoy. The Navy could really never count on operational support by trained and sizeable air units in Norway. Difficulties arose in regard to the determination of focal point of attack. Inadequate fighter cover made full use of naval bases at Trondheim and Bergen impossible, and finally resulted in endangering the ships in the northern-most bases (the Tirpitz for instance).  

The head of the Naval Staff, Vizeadmiral Wilhelm Meisel was also painfully aware of the Luftwaffe’s shortcomings in the post-1942 era and in a memorandum of 3 November 1943 on aerial reconnaissance over the North Sea and Arctic waters, pointed out a number of instances which highlighted Luftflotte 5’s inability to achieve anything of significance in the previous 12 months. At the top of his list was the attack by an Anglo-American task force headed by Duke of York and the United States carrier Ranger on German shipping plying Norwegian coastal waters off Bodø in October 1943. Taking advantage of Tirpitz’s poorly condition, and right under the noses of the Luftwaffe, this force ventured to within 250 kilometres of the coast, at which point the carrier’s Dauntless dive-bombers and Avenger torpedo-bombers “sunk as well as damaged seven of our tankers” noted Meisel indignantly. In fact, up to 23,000 tons of German shipping had been sent to either an icy grave or damaged by Ranger’s aircraft. This intimidatory attack graphically demonstrated how far Stumpff’s forces had fallen. In 1940 the Royal Navy received a mauling all along the Norwegian coast at the hands of the Luftwaffe, but three years later there was barely a snarl.

Despite continuing naval remonstrations, little had been done to remedy the reconnaissance situation because the Luftwaffe was simply too stretched on all fronts to consider the reinforcement of Norway seriously. For Meisel, it was clear that a
continuation of this situation would sooner or later spell disaster since the enemy could potentially advance almost unobserved into any number of fiords along the coast. Yet he had to admit in his memorandum of late 1943 that though the prospects for improving this situation were not encouraging, with the forces presently available to the Luftwaffe and their allotted fuel quota insufficient for extended tasks, the oncoming winter and darkness would make wide-ranging reconnaissance at best incomplete anyway. His only hope, and a forlorn one at that, was to alert the Luftwaffe to the dangerous situation.

Previously, in the summer of 1943, the Navy had asked the Luftwaffe to reconsider its earlier request for bomber units in Norway to be employed in reconnaissance duties. Schniewind in a memorandum to Luftflotte 5's headquarters in Oslo, enumerated his concerns regarding the present situation:

1. The air reconnaissance requested by Naval Group North, which is supposed to serve as a basis for the operations of the Command, cannot be nearly fulfilled, even under favourable weather conditions, with forces available.

2. The bomber forces available can under no circumstances be used for reconnaissance because such use of bomber forces is in opposition to strict orders from C.-in-C. Luftwaffe.

3. It is impossible to rely on other reconnaissance forces being brought in. Even if other special bomber formations should be brought in, they can under no circumstances be used for reconnaissance tasks.

Given the weakened state of the northern air fleet, Schniewind was careful to point out that he in no way intended to hold Luftwaffe 5 responsible for the lack of offensive operations, but since it seemed highly unlikely that a reinforcement of the air fleet was in the offing, he proposed that the ban on the use of bombers for reconnaissance purposes be lifted. Moreover, he hastened to add, this was not a demand for a separate air arm, since he felt that even if they had such a force it would be able to achieve "no more than Luftflotte 5 is achieving now." The Naval Staff concurred and forwarded the correspondence between the air fleet and the Maringruppenord on this subject to the head of the Luftwaffe General Staff, along with its own recommendation that: "in cases of emergency, freedom of decision should be given to Luftflottenkommando 5 as to whether bomber aircraft should be brought in for reconnaissance." This reasonable naval initiative, though, ignored one important fact: Luftflotte 5 did not currently possess any bombers for bombing missions, let alone reconnaissance tasks.

Even as the Navy passed on its concerns to OKL, Stumpff in Norway was only too well aware of how ill-equipped his so-called air fleet was to support any operation by Scharnhorst. If he had had difficulties in providing adequate air cover for Rösselsprung in
July 1942, when his inventory had stood at nearly 270 aircraft, by mid-1943 he was considerably worse off with no more than 170 combat aircraft. Of the 100-odd aircraft lost by Stumpff to the Mediterranean, most had been the offensive heart of his air fleet—the Ju 88 and He 111 bombers and torpedo-bombers of KG 30 and KG 26. Thus his strike force was now non-existent. Of the remaining planes, 70 were fighters and 100 coastal and long-range reconnaissance types. Adding to Stumpff’s woes was the fact that while numbers of the latter types had not fallen, they were now facing an increasingly heavy work-load all along the coastline, and, as the *Ranger* incident had demonstrated, could not cover every nook and cranny along Norway’s 2,600 kilometre length. Moreover, that of these 100 reconnaissance aircraft only 30 were designated long-range, and of these, only 13 were the true long-range Condors of KG 30, was also of increasing concern.

**Meteorological Duties**

The Condors were not only engaged in reconnaissance duties, however, but often found themselves taking part in clandestine relief missions to manned weather stations dotted around the Arctic region. Since the meteorological conditions, not only of Norway but of all Western Europe, are greatly influenced by the weather moving from west to east, the Germans engaged in a relentless struggle from early in the war to obtain the most up-to-date information on weather patterns in this region. They did this initially by using weather-reporting ships in the North Atlantic, before the loss of a number of these in 1941 led to the establishment of land-based weather stations from 1942 until the end of the war. Although aircraft could be used for weather monitoring work, and in fact Norway had during this period a couple of Meteorological Squadrons (*Wetterkundungsstaffelen*), *Westa 3* and *4*, based at Trondheim, and a *Wetterkette* (Weather detachments numbering three aircraft) situated both at Stavanger and Banak, the aircraft typically engaged in this work were able to venture only as far as the southern tip of Spitzbergen in the north and as far west as Jan Mayen and the Faeroe Islands. Known to British intelligence as *Zenit* forces—so named because of the “Zenith code” used by the Germans to encipher visual observations—these Luftwaffe units, usually equipped with Ju 88s and BV 138s, and on occasions supplemented by Condors, regularly undertook weather monitoring flights. In this capacity the *Zenit* planes acted almost as free lance agents of the Luftwaffe, providing accurate and recent meteorological information.

On top of this, Luftwaffe reconnaissance aircraft were at various times co-opted into supporting the land-based meteorological stations established on Spitzbergen and
Greenland. Of the two types of weather stations in common use, the automatic transmitter and the permanent meteorological and wireless station, the latter clearly needed greater regular provisioning and support. While U-boats were employed periodically for this, more flexible operations could be undertaken by aircraft—in this case the Condor—although BV 138s were also used, and later in the war, the BV 222. For example, when the *Holzrange* station on Sabine Island, off Greenland’s barren east coast, was bombed by American aircraft in the latter part of May 1943, Condors from Norway were dispatched on relief missions to the isolated scientists. Over the 1943–44 winter, these flights continued, with Ultra intercepts revealing that they were undertaken with the purpose of dropping supplies. By way of illustration, crypts show that on 16 November a flight was scheduled to take off from the Lofoten Islands to supply the isolated Germans, and this was followed on 11 January 1944 by a Condor operation from Norway “in connection with the Greenland meteorological station.” During February, a specially equipped and manned He 111 was dispatched from the Fatherland to Banak to meet the supply needs of the large numbers of men stationed in Greenland and elsewhere and on 14 March another Condor relief flight was completed. In the end though, pressure from Allied forces trying to locate and close down the facilities forced their evacuation by BV 138s and U-boats in that same year.

The mention of BV 138s in these operations is intriguing, since their rather limited range would normally have precluded their use over such long distances. It does seem likely, however, that the Luftwaffe, in an attempt to utilise greater numbers of aircraft in long-range sorties, were forced to devise ways of ingeniously refuelling these aircraft by U-boats. One of the best-known such missions was undertaken in the latter part of the summer of 1943, when two BV 138s, with the aid of U-boats for refuelling, carried out sorties from the Soviet Novaya Zemlya islands over a period of 21 days in an attempt to monitor shipping in the Kara Sea. As clever as this was, the complex refuelling and oiling process was time-consuming and potentially dangerous for both U-boat and plane as they sat as helpless as ducks on a pond. This method of extending the range of the BV 138s was, however, really only a stopgap measure that could never come close to satisfying the Luftwaffe’s and Navy’s need for a genuine long-distance reconnaissance aircraft. That this type of operation was embarked on at all was indicative of the lack of long-range planes in the Luftwaffe in general and in Norway in particular.

A snapshot picture revealing the small number of reconnaissance flights of all types being undertaken from Norway, and the extent to which weather sorties cut into aircraft
availability is revealed in a recently-declassified British intelligence report from the period. Derived from Luftwaffe Enigma decrypts detailing bomber, reconnaissance and coastal operations in the areas of Luftflotte 3 and 5, the lengthy summary looks at the week of 22-28 August 1943. Although unsurprisingly there were no offensive bomber operations recorded in this period for the Norwegian-based air fleet, there were a number of reconnaissance and weather flights. For instance, Fliegerführer Nord (West) had two aircraft regularly reconnoitring the Scottish east coast, and at least one operation round the north and north-west coast of Scotland was undertaken. Interestingly, the signals data also points to the arrival of a long-range photo-reconnaissance Bf 109 for a flight over Scapa, while from Stavanger irregular morning reconnaissance missions were flown by He 115s to supplement the regular evening sorties. From Trondheim, routine reconnaissance was carried out daily by two Condors between Iceland and Jan Mayen but no sightings were reported, and Westa 5 (based here and at Banak) engaged in their usual Zenit flights. Fliegerführer Lofoten was strangely quiet and flights were not recorded until 28 August when four BV 138s undertook a special, but unknown mission. In the far north-eastern reaches of the country, Fliegerführer Nord (Ost)’s routine morning observational excursions were made by two Ju 88s. In all, about 85 sorties were flown during this one week (compared to the over 400 flown by Luftflotte 3); that is, only 12 reconnaissance sorties a day for the whole of the Norwegian coast and its environs, plus the reconnaissance missions reaching further afield.

As if to forecast the impact of Luftflotte 5’s shortage of reconnaissance aircraft in the demise of Scharnhorst, Dönitz sent a teletype message to the Führer in mid-December 1943 regarding the “burning question of long-range reconnaissance for submarine warfare”, in which he noted that the enemy’s increasing use of radar had forced his U-boats “more and more below the surface.” “Surface tactics by submarines are a thing of the past” he lamented, for although finding convoys on the surface had been difficult at the best of times, Dönitz estimated that now being forced to operate submerged reduced by half the possibility of locating convoys. Therefore, the problem being felt in the Atlantic as well as in Norway, was the lack of long-distance aircraft available for maritime work:

Even now operations without air reconnaissance hold no promise of success. The past two months, however, clearly confirm that the extremely weak forces at the disposal of the Fliegerführer Atlantik cannot carry out the minimum reconnaissance requirements necessary for a submarine operation, even when strained to the utmost. Nine of the 14 joint operations already carried out were failures because the reconnaissance forces were so weak they could not detect the convoy sailing close by the submarine patrol line.
 Dönitz pushed for an acceleration of the Ju 290 programme and Hitler concurred, but Göring revealed that at this stage of production it was just not possible, because the building capacity of the Luftwaffe was already overburdened. If once again the lack of four-engined long-range bombers was having a detrimental effect on the war in the Atlantic, its impact was soon to be sharply brought into focus in the Arctic, where the dearth of long-range aircraft and an inefficient divided command structure would spell the death-knell of *Scharnhorst*.

Even at this late stage of the war, some officers in the field still felt that a consolidation of the respective operation staffs under a single command for Norway was required. In the second week of December 1943, *Vizeadmiral* Otto Ciliax, Naval Command Norway, who was at the forefront of these recommendations, suggested, in accordance with the Führer’s aim of saving personnel, that a joint Armed Forces Operations Staff in Norway be established. He laid out to the Naval Staff the advantages such a reorganisation offered:

1. Concentration of all military forces in Norway in one hand, thereby achieving an intensified defensive and offensive force.
2. Simplifying of the project for reinforcement of the defence of the whole area and its execution.
3. Stronger representation of the Armed Forces with civilian authorities and better utilisation of the forces employed by the latter.
4. The previous occurrence of discord and doubling-up of work among the three branches of the Armed Forces all working along their own lines would cease.
5. Considerable saving of personnel in command and administration.²⁵

The Naval Staff’s response was typically parochial. It rejected the proposal, because it felt that it would not only increase the requirements of the naval personnel if one of its own was put in charge, but it would also weaken its own hold over the naval forces in Norway as the new commander would be more dependent on OKW than the Naval Staff.²⁶ What the Navy had not fully appreciated yet was the fact that the vessels it still had parked in the north had well passed their use-by date, and, without co-ordinated air cover in future strikes, were increasingly a threat to the safety of their crews when at sea. Unable or unwilling to establish a single regional command and transfer in more aircraft, the stage was set for a tragic German naval blunder.

**The Death of Scharnhorst**

On 22 December 1943, a Luftwaffe aircraft sighted a convoy that would become the focus of Germany’s next attempt to bring its Norway-based surface force to bear on the Arctic
traffic. The aircrew’s report stated that this convoy, 670 kilometres west of Tromsø bearing north-easter, consisted of about 17 merchantmen and three tankers, with an escorting force of three or four cruisers and nine destroyers and corvettes.²⁷ Importantly, a covering force had not been sighted, but was presumed to be up to 780 kilometres distant in accordance with previous procedures and was unlikely to be spotted at this stage due to the thinner cover provided by the Luftwaffe further north of Norway’s Arctic coast.

The actual composition of JW 55B was nineteen merchantmen, accompanied by ten destroyers. Although the British did not have a three to four strong cruiser escort attached directly to the convoy, as mentioned in the reconnaissance report, they did have such a force made up of Norfolk, Belfast and Sheffield under the command of Vice-Admiral Robert Burnett on hand in the Barents Sea, protecting a convoy of empty vessels making its way back towards the British Isles. The usual distant covering force trailing some way behind JW 55B was Admiral Sir Bruce Fraser’s Home Fleet, made up of the battleship Duke of York, the cruiser Jamaica and four destroyers. Significantly, neither of these forces had been spotted by German reconnaissance and were hence unknown to the Naval Staff.

Meanwhile, Göring had refused point-blank to transfer any forces to Norway to operate against the convoy.²⁸ On top of this, Stumpff was reticent about expending his limited resources. On 22 December 1943, he stressed that he had no suitable combat forces available to participate in the proposed operation and was of the opinion that any further reconnaissance over the convoy area, on a scale to which the Navy had hitherto become accustomed, was “an unnecessary waste of personnel and material unless the Navy actually intended to take action.”²⁹ This was not an unreasonable position, given the surface forces’ half-hearted attempts to date. Stumpff asked Group North for information regarding its intentions and in his reply, Vizeadmiral Schniewind, the Fleet Commander, was to the point. Without adequate reconnaissance, the operation simply could not be carried out effectively. In quick-fire fashion, he listed three important reasons for this: continuous reconnoitring by air units was the only way to effectively lead surface vessels in for the kill; even after the convoy was picked up by U-boats, aircraft were indispensable for shadowing the convoy; and last, but not least, the Luftwaffe was desperately needed to sight a possible covering force. Nevertheless, Schniewind concluded that if there were “prospects for success, naval forces will operate against the convoy even if the Luftflotte does not carry out combat operations, which is only to be expected in view of the strained situation and non-arrival of reinforcements.”³⁰
Notwithstanding the conciliatory ending to the Admiral’s assessment, the arguments were compelling. With a dire need to do as much as possible to shore up the desperate German position on the Eastern Front, Stumpff agreed to support the Navy-inspired effort, under operation orders aptly entitled Ostfront. The next day, he informed the Naval Staff that his air fleet would do all that it could with the limited resources on hand, “not only because it is demanded by the Navy, but in the clear knowledge of what is at stake.” He promised continuous reconnaissance and maintenance of contact with the convoy, and constant, but not complete, contact with the covering group up to a distance of one day’s run around the convoy. Stumpff’s long-range aircraft would undertake probing reconnaissance as far as the east coast of Scotland and the region between the Shetlands and Jan Mayen. For the attacking surface forces, he could provide close air support as weather permitted, but no bomber sorties could be undertaken. In other words, Stumpff would do what he could but gaps were bound to appear. True to his word, Luftflotte 5 had two Ju 88s and four Condors dispatched to monitor contact with the convoy, and in all 36 planes were sent up on reconnaissance sorties throughout 24 December. Nevertheless, JW 55B’s covering forces still remained undetected, since even with a large portion of its reconnaissance force in the air, the area Luftflotte 5 had to cover was simply beyond its capacity by late 1943. As Konteradmiral Erich Bey, Commander of the Scharnhorst-led Task Force, exclaimed on Christmas Day, “the present reconnaissance over the convoy was completely inadequate and that it was absolutely necessary to extend it in search of the heavy enemy forces.” Prospects, however, were not good since deteriorating weather conditions were forecast for the day laid down for the operation, 26 December.

The predicted strong winds (force 6-8), heavy south-west seas, dense clouds, intermittent rain and declining visibility (expected to fall to 5-7 kilometres) would not only make air operations impossible, warned Fliegerführer Lofoten, but almost certainly force the U-boats to abandon their positions ahead of the convoy. In this situation, the Admiral Nordmeer, Kapitän Rudolf Peters in Narvik, recommended that the operation be broken off. The Naval Staff, however, pushed ahead explaining that the critical situation facing the German Army on the Eastern Front demanded action and since a covering force had yet to be detected by aerial reconnaissance, a quick attack on the convoy was warranted. Nevertheless, the operation was certainly risky: a fact fully appreciated by many, as indicated by Kapitän zur See Hans Düwel (the First Operations Officer, Admiral Nordmeer) in the early hours of 24 December:

The Luftwaffe commanders are doing their utmost with the strength available to locate the supposed enemy squadron. . . . They will not, however, be in a
position to give us an absolutely clear picture. . . . The British unit located yesterday by its [wireless] transmissions may well be the cover force closing. . . . Even if it is not reported today by air reconnaissance, we should still suppose it to exist, not only outside the 300-mile limit of air reconnaissance, but even inside this, having regard to the weather and intermittent failure of the equipment.35

In spite of these concerns, Dönitz—as he later wrote in his memoirs—deemed the situation ripe for action:

Our reconnaissance had not discovered the presence of any heavy enemy formation, though that, of course, did not mean that no such force was at sea. But if it were, it must have been a long way from the convoy, and the *Scharnhorst* seemed to have every chance of delivering a rapid and successful attack.36

Should heavy seas prohibit the use of destroyers, *Scharnhorst* was instructed to carry out the attack alone in “cruiser warfare style.” The Task Force left Alta Fiord at 1900 hours on Christmas Day.

By 0730 on 26 December, Bey calculated that this force was now situated northwest of the convoy and sent his destroyers south in extremely heavy seas to reconnoitre its likely path. Unbeknown to Bey though, Admiral Fraser, in anticipation of an attack, had sent the convoy on a northbound course further away from German Arctic naval bases and Luftwaffe airfields. At the same time, he directed Burnett to close up his three cruisers with the convoy. Rapidly the situation was turning against the Germans, and separated from her destroyers, *Scharnhorst* came under fire at 0926 from the cruisers. Bey, however, could not determine where the fire was coming from because his ship was shrouded in a snow storm. It was not long before shells began falling with alarming accuracy all around the battle-cruiser, and within moments a hit knocked out the ship’s radar room. Under the abysmal prevailing weather conditions, it did not take long for Bey to conclude that the enemy ships had initially located *Scharnhorst* (and were now tracking her movements) with the assistance of radar. While his own equipment had been turned off in order to avoid detection, the Royal Navy cruisers had for the last 50 minutes been able to follow his every move, setting up an ambush. Although on paper the cruisers lacked the pure muscle for a stand-up fight with a battle-cruiser, their radar-directed salvos were extremely accurate and were more than a match for the heavier fire-power of *Scharnhorst*, which could only be directed very imprecisely by the muzzle flashes of the enemy. This put the big ship at a decided disadvantage, especially as both *Belfast* and *Sheffield* were using a new non-flash powder.37 Under the impression that he had been engaged by a battleship, Bey, in obedience to his strict instructions not to engage heavy forces, disengaged and ordered the
German destroyers south of the battle to withdraw from the field. As Scharnhorst fled south-east, slowly pulling away from the trailing British cruisers and the convoy’s destroyers, Fraser’s force began to close in on its quarry.

Not that the Germans were totally unaware of Duke of York drawing the noose around Scharnhorst. The naval signals intercept service, B-Dienst, since 0943 had been picking up a constant flow of messages that were obviously originating from Burnett, detailing the movements of the Scharnhorst. However, the recipient of these messages, under the call sign “DGO”, was more of a mystery, though intelligence personnel assumed ominously that it was another surface force. At 1113, Marinekommandonord/Flotte postulated that the “reporting from one British unit to another could have been addressed to the convoy from a cruiser, but may well equally have been a direction of the supposed heavy cover force towards the target.” These reports, however, were not forwarded to Bey who remained oblivious to this unpleasant possibility.

Confirmation of naval suspicions was being gathered by the Luftwaffe. Although Fliegerführer Nord (West) reported that it would not be able to carry out its scheduled flights until 2100, and in spite of Fliegerführer Lofoten’s earlier indications that it would not even be able to get aircraft into the air due to the turbulent snowstorms buffeting the area, the gravity of unfolding events led to the latter air commander getting at least three BV 138’s loaded with the latest Hohentwiel radar sets aloft. Indeed, these were the only aircraft that would have made any difference to the outcome of what was to shortly take place, since their effectiveness was not based on optical visibility, close to nil by this time, but rather technical efficiency. At 1012, contact was made with Fraser’s force and a brief report sent in. For the next hour and a half, contact was maintained with the enemy vessels, and at 1140, a more detailed second signal stated that “apparently one large and several small vessels” had been located and were believed to be travelling south at high speed.

Incredibly, this vital information collected by aircrews at great personal, languished at Fliegerführer Lofoten’s headquarters for a full three hours before even the first brief signal was passed on to the Navy at 1306. The second detailed message was withheld even longer, apparently because the air commander, Oberst Roth, doubted that such a detailed picture of the fast-moving force could be accurate given the weather situation. Only after the aircrews had returned and verbally corroborated the assessment did Roth forward the latter report, but by then it was too late. The enemy group picked up by the airborne Luftwaffe radar was, of course, the force led by Duke of York, but since only the initial
curious report was relayed to the Navy, Bey was only informed that several vessels had been located and at 1530 after receiving the news via Admiral Nordmeer, the crew were informed: “Signal from the Luftwaffe. Reconnaissance plane reports enemy fleet detachment 250 kilometres west. Keep sharp lookout.” The report had taken over five hours to reach Bey and did not make any mention of the possibility of a capital ship being present, unlike the second report. Poor inter-service communication and the twin command structures in Norway were once again having an adverse effect on the war in the Far North.

Meanwhile, time was rapidly running out for the German battle-cruiser, because at 1617, the mysterious “DGO” signalled that it had made contact with a target only 38 kilometres distant. The conclusion was obvious. “As ‘DGO’ later sent out tactical orders to the rest of the formation she was most probably in command of the covering group”, deduced the Naval Staff in Berlin. By 1643, the British battleship using her radar in pitch darkness had reduced the distance to its unsuspecting prey to barely 13 kilometres. Within minutes, Scharnhorst was engaged in a life and death running battle with Duke of York and Burnett’s cruisers. It was a decidedly mismatched struggle and the following signals from Bey chronicled the demise of his warship:

1656 Engagement with a heavy battleship.
1724 I am encircled by heavy forces.
1819 Enemy firing by radar at range of more than 18 kilometres.
1825 To Führer! We will fight on until last shell is fired.

Through a number of direct hits, the 36-cm guns of the British battleship slowed the ailing Scharnhorst, and these were soon followed by a series of torpedo strikes delivered by the destroyers, further reducing her speed. Although the Naval Staff made a desperate and impossible plea to the Luftwaffe at 1935 for a torpedo attack, it was already too late. Once Scharnhorst’s heavy armament was knocked out, Jamaica and Belfast were sent in to finish off the stricken vessel with torpedoes. The ship capsized at 1945 and nearly 2,000 men were killed.

The soul-searching aftermath of the ill-fated Ostfront operation identified two critical flaws. The first centred on the enemy’s ability to locate, track and attack the German ship even in the most appalling conditions, thanks to his accurate radar system. In theory, Scharnhorst enjoyed the upper hand the against cruisers which struck early on in the battle, but enjoying the benefits of modern technology the Royal Navy easily nullified the German ship’s superior armament. The Führer was naturally unhappy with the outcome of Ostfront and in particular Bey’s decision to break off his fight with the cruisers when clearly—on paper—his ship was superior to them with regard to both fighting power and
armament. Dönitz explained: “surface ships are no longer able to fight without effective radar equipment.” On top of this, the British radar prevented the Scharnhorst quietly slipping from the battlefield as her movements were able to be monitored at all times. This allowed the cruisers to maintain contact with the fleeing ship and guide in Fraser’s battleship.

Naturally enough, the second deficiency isolated in the inevitable post-mortem of the sinking focused on the lack of air reconnaissance. Schniewind in his assessment stressed not only the importance of British radar, but also the “inadequacy of our air reconnaissance” as causes for the loss of the big ship.47 The Naval Staff concurred, pointing out that “weak German air reconnaissance was unable to detect the position of the enemy forces in time, so the latter were able to cut the Scharnhorst off from her base, encircle and destroy her.”48 Perhaps more remarkable was the fact that given the appalling weather conditions, Luftflotte 5 was able to get any aircraft into the air and that the airborne new radar actually worked. Nevertheless, this, and poor inter-service communications aside, the loss of Scharnhorst had demonstrated what everyone already knew: the Luftwaffe in the Far North simply did not have enough aircraft to perform even the most essential of reconnaissance tasks satisfactorily.

Luftflotte 5’s strength did not substantially increase in the New Year, and although the new commander, General der Flieger Josef Kammhuber (the former head of night fighters) could call on about 15 Condors, he was unable to do anything to impede the progress of the Murmansk-bound convoys since the air fleet still lacked a strike force. In early January, Stumpff had been appointed commander of Luftwaffe Befehlshaber Mitte, which was soon to be upgraded to Luftflotte Reich, an unenviable posting and despite greater numbers of aircraft at his disposal than in Norway, even more difficult.49 Meanwhile, the unavailability of a strike force was compounded by the Allies’ increasing use of escort carriers over the 1943-44 winter and the resurgence of Soviet air power at the eastern end of the Arctic route. For Luftflotte 5, the continued appearance of escort carriers was particularly disconcerting and in March 1944, Allied aircraft from these carriers dealt the air fleet’s reconnaissance forces a heavy blow when they shot down six German machines. This was the last straw, and on 2 April Kammhuber advised the Navy that he would no longer authorise maritime reconnaissance in support of the Navy. This effectively ended the Luftwaffe’s threat to convoys.50 The cost had become simply too high to justify the meagre results achieved.
As if the Scharnhorst tragedy and the admission that they were unable to undertake further daylight reconnaissance were not enough, the Luftwaffe in the Far North had one other reminder revealing how far the mighty had fallen. As a stark testimony to the Germany’s flawed strategy (or rather lack of strategy) that saw it begin a war without long-range maritime aircraft, the He 177 finally arrived in Norway in February 1944—over three years too late. Intended to replace the faithful Condors, more often than not these ill-omened behemoths simply sat on Trondheim’s Vaernes bleak, windswept airfield as the Allies’ own four-engined bombers struck at the Third Reich’s fuel supplies. With the “fuel famine” biting deep into Luftwaffe fuel reserves, it was determined that Germany simply could not afford to have too many of these fuel-hungry planes in use, especially in Norway, when the main effort now firmly rested with the defence of the Reich. It has been calculated that a single medium-range attack by a wing of He 177s would consume at least 480 tons of fuel, that is, an average day’s output from the Reich’s entire fuel production in August 1944. Although, as we shall see, the Luftwaffe in Norway was remarkably well off compared to the Fatherland with regards to aviation fuel stocks in the latter part of the war, in early 1944 these four-engined machines were more of a burden than an asset due to their high fuel consumption. Göring had prophetically foreseen this eventuality in February 1943, when at a major conference focusing on the He 177 he stated:

I am of the opinion that the building of our aircraft should not depend in any way on the fuel program. I would rather have a mass of aircraft standing around unable to fly owing to lack of petrol, than not have them at all.

His bizarre preference was fulfilled in Norway with the He 177, where these giants were forced to languish while less thirsty aircraft took to the air. Realistically though, even if they could have utilised this handful of aircraft, they were unequal to the now insurmountable tasks that faced the Germans in Norway and elsewhere. They had been needed in 1940, in Luftflotte 5’s attempt to stretch the defences of Fighter Command during the Battle of Britain, while from 1940 until 1942 they would have been invaluable flying from Norwegian and French airfields in establishing a “siege of Britain” in co-operation with the Navy’s U-boats. It was at these times and places that the possession of significant numbers of He 177s might well have swung the conflict in Germany’s favour, but not in early 1944 when for all intents and purposes the outcome of the war had been decided.
Fighter Defence

As if the ignominious and avoidable loss of *Scharnhorst* was not enough of a bitter pill to swallow for *Luftflotte* 5, the weakness of the Luftwaffe’s fighter forces was also laid bare by an increasing number of air raids being made by Allied bombers on Hitler’s northern empire. Throughout 1941 and 1942, Bomber Command had undertaken barely 100 sorties to Norway and many of these were for minelaying operations; but by 1943, major raids were possible and included a significant contribution by the Americans.\(^{55}\) Stumpff’s fighter defences in Norway came principally under the control of *Jagdfliegerführer Norwegen*, consisting loosely of four single-engine fighter groups (*Jagdgruppen*), a twin-engine squadron of Bf 110s (*Zerstörstaffel*), and a fighter-bomber squadron of Ju 88s (*Jabostaffel*), whose main force was JG 5 *Eismeer*, under the command of Oberleutnant Gotthardt Handrick.\(^{56}\) Of the 70-80 single-engine Bf 109s and Focke Wulf Fw 190 fighters operating in Norway in mid-1943, at least half (I/JG 5) were at any one time based above the Arctic Circle protecting the vital German supply ships plying northern Norwegian coastal waters from Soviet-based aircraft; the balance (IV/JG 5) were deployed below the Circle to fend off bomber raids launched from Britain.\(^{57}\) Although the former were able to successfully prevent even a single coastal vessel from being sunk between June and October 1943, the latter units simply had to cover too great an area with too few machines. Thus against the increasing numbers of high flying Anglo-American foes appearing over Norway in 1943-44, they were unable to little more than niggle at the attackers. Incredibly, given its already weakened state, the Luftwaffe began transferring units away from the region at least as early as October 1943 and by December fully half of JG 5 was based in Germany for home defence.\(^{58}\)

The last major success of the defensive fighters of JG 5 against British aircraft had come in the closing days of 1941 when they shot down eight out of 29 Bomber Command aircraft sent to support the raids at Lofotens and elsewhere which had fuelled Hitler’s Norway paranoia. In 1942 and in the years that followed, successes such as these would be few and far between. For the most part, the Anglo-American raids were directed at either the industrial facilities forming the heart of Hitler’s economic plans for Norway, or the U-boat pens under construction at Bergen and Trondheim, destined to become his Nordic Singapore. Of these raids, the major missions (excluding the minelaying of coastal waters) were undertaken by the United States’ Eighth Air Force and RAF’s Bomber Command. An examination of the mission folders of the American effort reveal with startling clarity the weakness of German defences.
From their fields in East Anglia, the Eighth Air Force took off for Norway for the first time on 24 July 1943, their target: the newly-constructed aluminium, magnesium and nitrate factories at Heroya, lying between Kristiansand and Oslo on Norway's south-eastern shores, and the U-boat and harbour installations at Trondheim and Bergen. The main target was the light metals works at Heroya, and since only light defences were anticipated, the 167 B-17 bombers would fly in at a very low operational altitude of 16,000 feet and without the protection of long-range fighters. In the end, they may as well as have flown much lower as defensive measures were completely lacking; as the report detailing the mission noted, enemy "opposition was weak."59 The American aircraft were picked up by the extensive German radar system running along the coast at 1158, when 83 kilometres south-west of Stavanger. Jagdfliegerführer Norwegen immediately put up an estimated five Rotten of fighters to patrol between Stavanger and Lister and further aircraft were sent north as soon as it was realised that bombers were also making their way towards northern targets.60 The encounters of 1st Wing whilst dropping over 400 tons of bombs on Heroya were described in the American after-action report:

The three forces of 1st Wing experienced a total of 21 encounters, 14 from Fw 190s and 7 from Me 109s. The attacks started at about 1330, after the first force had bombed and begun on the return journey, lasting until about 1500. Encounters were sporadic and by single enemy aircraft, and varied from weak attacks to aggressive attacks pressed home.61

Further north, the raid on Bergen and Trondheim was being carried out by 4th Wing whose aircraft had been specially equipped with long-range fuel tanks, allowing them to undertake the Eighth Air Forces' longest round trip mission thus far in the war. Although, due to impenetrable cloud cover, the Bergen component had to be aborted because of the American policy of avoiding indiscriminate bombing over occupied territories, 41 bombers did make it to Trondheim where 79 tons of bombs were dropped on harbour installations. Aerial defences over Trondheim were even lighter than those over Heroya and only 12 encounters were recorded, beginning at 1415 and ending at 1435. The lack of adequate protection gave the B-17s plenty of opportunity to hit targets with few distractions and at Heroya the ensuing damage brought work at the nitrate plant to a halt for three and a half months, while the Germans were forced to completely abandon the partially-completed aluminium and magnesium installations.62 At Trondheim, although one eyewitness felt that the bombing had been carried out with "impressive accuracy" and that a good deal of the harbour had been badly damaged, the U-boat pens' thick concrete construction prevented any significant impression being made on these facilities.63 Overall, Luftwaffe opposition
was at best slight and only one bomber of the 309 sent to Norway failed to return—and that machine, which landed safely in Sweden, had been damaged by flak, not fighters. That the Germany defences were markedly inferior to their homeland counterparts was glaringly apparent to the Americans, who in the period 24 July to 30 July 1943 had lost 88 aircraft in six costly raids on the heart of the Third Reich.\textsuperscript{64}

Two subsequent attacks were made by the Americans on 16 and 18 November 1943 with similar results. The targets of the first raid were all based in south-western Norway at the Vemork power station and electrolysis plant at Rjukan, the molybdenum mines at Knaben, and the Oslo-Kjeller Aircraft Repair Depot and aerodrome. Once again, the B-17s and B-24s were forced to rely on their own substantial defensive armament since no fighter escort was possible and a belief that flak defences would be weak meant the attacks would be made at no more than 3,700 metres. By now, the number of aircraft on call to the \textit{Jagdfliegerführer} had fallen further as fighters were siphoned off for home defence and the Americans correctly calculated that the German fighter commander had no more than 50 single-engine fighters at his disposal in southern Norway and another 30 night fighters in northern Denmark. As Eighth Air Force records show, once they were picked up by radar the Luftwaffe put up their meagre clutch of fighters with the same depressing results:

When the enemy realised that the bombers were about to cross the Norwegian coast, he sent single engine fighters to meet the bombers both from bases north of the entry, and from bases south of their entry in Denmark. . . . The attacks by both these formations lacked aggressiveness and skill, and only a few of the enemy even made any attacks.\textsuperscript{65}

Cloud cover over Oslo prevented an attack there, but the flak and fighter defences were so weak at both Rjukan and Knaben that the bombers were permitted to make on average two runs over both targets, wrecking havoc on the power station, electrolysis plant and the mines. Of the 388 aircraft dispatched, only two bombers suffered injury.

The failure to attack the Luftwaffe's supply and maintenance depot at Oslo's Kjeller airfield led to a renewed effort two days later by 78 Liberators. To intercept this force, aircraft from the Norwegian airfields of Lister, Stavanger and Bergen were scrambled, as well as twin-engine fighters from Grove and Aalborg in Denmark. Wireless intercepts of \textit{Jagdfliegerführer Norwegen}'s local controllers graphically reveal the piecemeal effort the Germans were able to muster in response to the incoming bombers:

<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1045</td>
<td>4 Fw 190s landed in Sola from Herdla</td>
</tr>
<tr>
<td>1126</td>
<td>2 Fw 190s landed in Herdla from Vaernes</td>
</tr>
<tr>
<td>1220</td>
<td>2 Me 109s started from Sola</td>
</tr>
<tr>
<td>12--</td>
<td>4 Me 109s started from Sola</td>
</tr>
<tr>
<td>1218</td>
<td>1 Fw 190 started from Sola</td>
</tr>
</tbody>
</table>
1243 2 Fw 190s started from Sola
1547-49 4 Fw 190s landed at Sola
1546 2 Me 109s landed at Sola

Once again, a majority of pilots failed to press home their attacks in a total of 50-60 sorties, although the few that did were rewarded for their efforts and along with flak, hit nine Liberators—some of which made their way to Sweden and internment. In general, though, the small number of aircraft available was in no way equal to the task at hand and proved of only minor nuisance value. Overall, of the 775 sorties carried out by the Eighth Air Force in these three missions, only 12 aircraft were lost.

The Luftwaffe in Norway was also spectacularly ineffectual against British operations. Excluding the regular minelaying sorties in Norwegian coastal waters, Bomber Command from 1943 until only a few days before the end of the war carried out numerous missions over Norway, more often than not by Lancasters supported by Mosquitos. These ranged in scope from the relatively small ten-plane raid on the molybdenum mine at Knaben in March 1943 to the large 237-strong bomber attack on the U-boat pens at Bergen in October 1944. This latter target became increasingly important after D-Day when, once the Germans lost their French U-boat bases, they were forced to shift the bulk of their U-boat effort to Norway. It was at Bergen that Allied bombing over Norway would inflict the heaviest civilian losses. Unlike the Americans, the British were less circumspect over where their bombs fell, and in two big raids on 4 and 28 October 1944 over 150 people were killed; that is, one fifth of all civilian casualties (752) suffered throughout the war in Norway due to Allied bombing. Nevertheless, in figures closely paralleling the American offensive, Bomber Command in some 780 sorties lost only about 12 aircraft—and a good proportion of these were accounted for by flak rather than defensive fighters.

Jagdfliegerführer Norwegen, like the other Fliegerführer in Norway, simply lacked the requisite forces to threaten seriously let alone prevent Allied bombers from flying over Norway and leaving a trail of carnage in their wake. As an examination of the Luftwaffe effort reveals, due to a dearth of available fighter units the Germans were often only able to put machines into the air in twos and threes, and these, of course, were often unwilling to press home attacks against a large number of Allied bombers fair bristling with defensive armament and flying in close formation. The only saving grace for the German defences was that the Anglo-American bomber fleets had richer and more important targets to hit over continental Europe and therefore they escaped the full brunt of their considerable might. Nevertheless, the depths to which the Luftwaffe in Norway had sunk were highlighted by the shameful antics surrounding the sinking of Tirpitz.
The Loss of *Tirpitz*

Alongside the U-boat pens, *Tirpitz* remained the only consistently-attacked target in Norway. Although for most of the war the battleship had remained tucked safely in her Nordic hideaway, to the British her mere presence represented a threat to any passing convoy. The damage caused by the midget submarines in September was not repaired until the spring of 1944, by which time, of course, the RAF had well and truly found its feet in aerial operations over Norway. Numerous strikes were made against the battleship up until September 1944, when in a particularly heavy raid, 39 Lancasters caught the 45,000 ton battleship in Alta Fiord and damaged her so badly that she had to be towed to Tromsø to operate as a stationary floating battery. In none of these strikes were German defensive aircraft even a minor hazard, let alone a significant deterrent. In fact, a disturbing decline in Luftflotte 5's fighter operations had begun to set in by the second half of the year. From January to June 1944, the air fleet's fighter forces had averaged 497 sorties a month but for the next five months this figure fell dramatically to only 31 a month. Coupled with this was the Luftwaffe's continued refusal to provide permanent air cover for the battleship now residing once again in Alta Fiord, since it reasoned that JG 5 was only 80 kilometres away by air at Banak. With British determination to dispose of the battleship once and for all and the concurrent sharp decline in fighter capabilities, the scene was set for a disaster of titanic proportions.

On 12 November 1944, 30 Lancasters took off from Lossiemouth in northern Scotland to attack *Tirpitz*. Enjoying perfect weather the bombers approached the ship from the east, hitting it with at least two six-ton Tallboys. Violent explosions wracked the hull causing the ship to capsize, and despite attempts to rescue as many as possible of the trapped crew by cutting holes in the upturned hull, 1,000 of the 1,900 men on board were lost. "Our own fighters", noted the OKW war diary, were ineffectual and "arrived too late" on the scene to be of any use. Yet again, the Luftwaffe had not even shown its face, despite the fact that radar had given ample warning of the incoming intruders. Numerous explanations for the failure of JG 5's fighters to intercept the bombers were given. The most innocuous suggested that an inter-service communication failure had prevented contact, but more sinister rumours also abounded. For instance, a Luftwaffe Field Workshop Obergefreiter at Bardfloss reported under interrogation that when *Tirpitz* was sunk, the pilots were having a drinking party and when the alarm went off "they were drunk and flew in the wrong direction". Although this report may well have a degree of truth to it, in
actual fact it does appear that Major Heinrich Ehrler, JG 5’s Kommodore, was on unofficial leave with his girlfriend in Oslo at the time, and in the resulting furore Dönitz had him successfully court-martialled. Only Ehrler’s exemplary record and status as an ace, with some 200 victories claimed, saved him from execution and he was transferred to home defence where he flew Messerschmitt Me 262s until his death at the controls of one of these jets on 4 April 1945. In many ways, even if the drinking stories were true and the Major’s dereliction of duty is taken into account, it does seem likely that Tirpitz was on borrowed time. This was especially so when one considers that even with sober pilots and JG 5’s Kommodore on site, the British had already hit the battleship on numerous occasions without Luftwaffe opposition.

The loss of Tirpitz changed the face of the war in the Far North overnight. As Stephen Roskill noted in his multi-volume official work on The War at Sea, “one may doubt whether a single ship ‘in being’ had ever exerted such great influence on maritime strategy.” Though she had only ever fired her guns once in anger, and that against land-based targets on Spitzbergen, her sheer size, speed and fire-power had made Germany’s last true battleship a threat right to the end. Her mere presence in the Far North forced the British to maintain at all times a strong fleet combining battleships, carriers and supporting vessels just in case she was aroused to intercept a convoy or worse yet attempt a break-out into the Atlantic. With her death, the Royal Navy’s global deployment benefited greatly. No longer were resources tied up on the chance that Tirpitz might do something, but could be distributed to areas of greater need. For the Germans, their surface fleet was reduced to the two pocket battleships Scheer and Lützow, a handful of cruisers and some destroyers. Of these, the bulk were committed to supporting the hapless German retreat in the Baltic. Once again, Allied bombers had been able to act with impunity over German occupied Norway.

Fresh Fears of Invasion and the Paper Air Force

The sinking of Scharnhorst and the poor performance of the Luftwaffe may well have helped rekindle Hitler’s “Norway paranoia.” From late 1943, the Führer’s concern for his most northern possession began to burn brightly once more, fed by Allied deception plans for the Normandy landings, and dubious unsubstantiated intelligence reports surrounding the possibility of an Allied landing somewhere on the northern flank in 1944 and 1945. Despite the disasters of Stalingrad and Kursk, Hitler felt that the greatest danger to the Reich lay in the West. “The danger in the East remains, but”, he cautioned in November
1943, "a greater danger now appears in the West: an Anglo-American landing!" He reasoned that the huge territory in the East made it possible to lose ground there on a very large scale without Germany suffering a fatal blow to its "nervous system." On the other hand, an invasion in Western Europe along a broad front would prove to be too great a threat to German conduct of the war, and Hitler ominously warned that its "immediate consequence would be unforeseeable." His solution was a reinforcement of forces and although Norway did not get a specific mention in these plans, he pointedly stressed that a "pinning down and diversionary attack" could be expected on other fronts, including a possible major assault on Denmark. Norway, however, was too close to the Führer's heart to be ignored for long and in 1944 the "zone of fate" assumed ever increasing importance in his mind.

The Allies for their part had no serious intention of operating in Norway, despite Churchill's own Nordic obsession. Indeed, the only major operation they had planned for Norway was of the deceptive variety. Under the umbrella deception action known as Bodyguard, operations Fortitude North (Norway) and Fortitude South (Pas de Calais) were designed to fool the Germans into believing that the Allies planned not one, but a series of invasions along the shores of occupied Western Europe. This would lead them to divert their defences further afield and away from the intended landing site at Normandy. To create a believable impression that such operations actually were being prepared, a gradual build-up of radio traffic was generated in Britain at the imaginary headquarters responsible for the two false expeditions. The illusionary Norwegian operation was to be accomplished by the notional Fourth British Army based in Scotland and Northern Ireland.

These deception measures were also reinforced by reports sent to Germany from a number of controlled and uncontrolled sources in Britain, of which the supposedly pro-German Swedish naval and air attacks in London were the most influential. In the first half of 1944, these attachés, under the cover name Josephine, repeatedly fed the German Abwehr officer in Stockholm information alleging that large numbers of troops were being assembled in Scotland for an Allied expedition to Scandinavia. Although scholarship remains divided over the effectiveness of Fortitude North (the Pas de Calais deception was on the other hand indisputably successful), there can be little doubt that both Hitler and the Navy were still convinced of the strategic importance of Norway to the German war effort. Therefore, these deceptions preyed on the pre-existing German preoccupation with Nordic security and consequently troop numbers there increased from 359,233 men on 1 March to 372,063 men on 1 July 1944, while coastal defences were further reinforced.
Although a considerable figure, it should not be forgotten that overall it did not represent Germany’s fighting élite as, aside from the force withdrawn from the northern sector of the Eastern Front, there was a significant proportion of elderly men who were poorly trained and equipped among their number.

The Luftwaffe was not to be left out of Hitler’s plans, and even though it was not possible to carry out a large reinforcement of Luftflotte 5 at the time, Göring issued a major contingency plan for the Northern Flank on 6 January 1944 which would remain in force until the end of the war. Going under the ponderous code-name Drohende Gefahr Nord (Impending Threat North), the preamble to the order noted that despite increasing signs that a landing was imminent in the West, they could also reckon with the “possibility of an enemy landing attempt in Norway or Denmark, or even a simultaneous operation including southern Norway and Jutland.” Unwittingly paralleling Churchill’s suggestion that the Allies roll up Europe from the top, Göring pointed out that such an enemy action could be attempted either as a “decisive operation to roll up our northern front”, or as a diversionary undertaking for a major landing in Western Europe. “In any case”, he continued, “warding off this landing attempt would be decisive for the conclusion of the war.”

In the following plans, contingencies were examined and geographical operational areas assigned. For instance, should an Allied expedition attempt an operation in Norway the command of all resources of Luftwaffe Befehlshaber Mitte (Gen.d.Lw.Dänemark), an adjunct of the soon to be established Luftflotte Reich, would fall to Luftflotte V’s command, whose operational and reconnaissance area stretched north from a line running out to Newcastle on England’s north-eastern coast from the northern tip of Jutland. The units in Europe to be made available for “immediate reinforcement” of Luftflotte 5 in the advent of a major Allied operation included reconnaissance units and bombers from Luftflotte III, comprising five groups from KGs 26, 100, 54 and a single group of He 177s from KG 40’s Bordeaux base. Five fighter (Bf 109) and two Bf 110 groups also would be surrendered from Luftwaffe Befehlshaber Mitte. On top of these, ground attack units of Fw 190s from Luftflotten II and III, plus night fighter units from Luftwaffe Befehlshaber Mitte would be included in the force. Should the Norwegian invasion take place without a corresponding landing in the West, the Luftwaffe in Norway could reckon on being supplied with further fighter wings of Bf 109s, a further bomber wing of Ju 88s in strength up to three groups and a long-range squadron of Junkers Ju 188s from Luftwaffe Befehlshaber Mitte (Gen.d.Lw.Dänemark). In theory then, the air fleet could have approximately 500 additional aircraft at its disposal in the advent of an invasion of Norway.
Certainly on paper this looked impressive and if carried through would have brought the air fleet in Norway close to its combat strength of April-June 1940. In other words, Luftflotte 5 would have been more than an air fleet in name only. Whether this grand scheme would have worked we will never know, but what the plans do demonstrate is that Hitler was still obsessed with Norway and only too willing to prepare schemes against the day the Allies did show up at Norway’s front door. The strategy also had one other important ramification not widely appreciated: it diverted a large amount of aviation fuel to Norway.

Contrary to popular belief, Norway did not suffer an aviation fuel shortage during the closing months of the Second World War. While vital defensive operations being flown over the Reich in the final stages of the war were severely hampered on occasions by petrol shortages, the planes stationed in Norway, though few in number, never had to worry about running short of aviation fuel. The documents surviving the war tend to suggest that this resulted from the stockpiling of aviation fuel for Drohende Gefahr Nord. Luftwaffe planners were only too well aware that the arrival of large numbers of aircraft in Norway as envisaged in this plan would require equally large stocks of fuel on hand for subsequent missions. Consequently, over 1944 the Germans began to assemble considerable petrol stocks in Norway in case Drohende Gefahr Nord was ever activated.

The Germans had begun the war with a stock of 492,000 tons of aviation fuel, capable of supporting three months of campaigning. Though this was two-thirds below the amount the Luftwaffe had hoped to enter a war with, it was ample to meet the demands of Blitzkrieg assaults launched on Poland, Norway, France and the Low Countries. It was only after the invasion of the Soviet Union that the Luftwaffe, and the other two services, began to feel the pinch of inadequate supplies. Up until then, Germany had been a big importer of Soviet oil but of course this ceased with Barbarossa, forcing it to rely increasingly on domestic synthetic production and Romanian imports. Despite a couple of serious dips in Luftwaffe reserves in the intervening years—falling as low as 160,000 tons in mid-1942—by April 1944 stocks had risen to 580,000. In the very next month, however, the German synthetic oil industry was sent reeling by the bomber strikes of the Eighth Air Force. Flying mostly by day, the American aircraft in May were so effective that at least 90 per cent of the aviation fuel industry was hit. Production fell immediately from 188,000 tons a month to barely 9,000 tons. Despite bringing in some 200,000 workers to restore the industry to its previous capacity, monthly production slumped to an amazing low in
September of only 3,500 tons after renewed air attacks, and by December 1944 had recovered to just 25,000.\textsuperscript{85}

Such a dramatic fall in production was naturally followed by a rapid decline in Luftwaffe and OKW reserves, with stocks plunging from the high tide mark of 580,000 tons to 180,000 in September 1944. The usual curtailing of aircraft testing and training programmes was insufficient to stem the decline, and the Luftwaffe was forced to reduce air reconnaissance, while the number of night fighter sorties was pared back and close air support for the Army was only permitted in “decisive situations.”\textsuperscript{86} Despite occasional surges in activity, a renewed Allied bombing effort against the synthetic fuel plants in early 1945, and the overall decline in the availability of pilots and munitions, meant that the bulk of aircraft in Germany would never see action again as they sat out the final months of war in large air parks.\textsuperscript{87} Notwithstanding this general decline in aerial activity over Germany, in Norway the fear of an Allied invasion even so late in the war prompted not only the transfer in of a small bomber strike force but also an expansion of existing operations.

Despite the fact that Norway was not directly involved in the main event taking place on the Continent, this northern arm of Hitler’s shrinking empire was more important than ever, because from mid-1944 it remained the Reich’s sole strategically significant naval centre. This was especially true since the Führer believed that, like their rocket and jet wonder-weapon cousins, Dönitz’s new and improved U-boat types equipped with \textit{Schnorchel} (which enabled the U-boat to recharge their batteries while at periscope depth) were destined to bring about a revival of Germany’s fortunes. Or so Hitler vainly imagined.

For the Navy, as well as providing invaluable bases for U-boats, control of southern Norway and Jutland was indispensable for maintaining the free movement of their vessels in and around the Baltic approaches.\textsuperscript{88} Heightening German concern was the Swedish Government’s decision in August and September to withhold insuring Swedish ships bound for German ports and the closure of Sweden’s ports to Axis shipping. The former move deprived Germany of one quarter of the shipping available for imports, while the latter forced it to rely solely on Narvik for iron ore. These Swedish initiatives deepened German mistrust, and combined with Finland’s departure from the Axis cause in August, made Norway seem even more important in Hitler’s eyes than ever before. Added to these concerns were of course, the ubiquitous reports making their way to the likes of the German Naval Staff in October and November, warning of imminent invasion all along the Norwegian coast and Denmark.\textsuperscript{89}
Although there were plenty who doubted that such an operation was possible or even being considered by the Allies, Hitler was not about to take any chances, since he felt that the deteriorating relationship between Britain and the Soviet Union was just the catalyst to spark an occupation of Narvik by the former in order to thwart a Red Army advance down Norway's western coast. As well as the dubious reports submitted from the likes of Josephine, Hitler's fears were fuelled by a large Soviet push in the Far North supported by a Soviet landing on the Barents Sea coastline in behind the German northernmost flank.\textsuperscript{90} The Soviet assault was successful and on 15 October the port of Petsamo was occupied and by the 25th, Kirkenes was captured and the Germans pursued as far as Tana Fiord. Although the Soviets made no further advances and even pulled back slightly, the occupation of this small segment of northern Norway and the loss of Tirpitz in December meant (in Hitler's mind at least), that the possibility of a British operation could not be ignored.

Real Reinforcements, but Little Change

As well as strengthening and improving coastal defences, increasing the strength of land-based forces and shuffling around the Navy's embarrassingly small resources, it was at this point in time that the Luftwaffe also got a shot in the arm.\textsuperscript{91} To protect German shipping plying Norwegian coastal waters with supplies for the northern-based soldiers and to resume attacks on Arctic traffic, the Luftwaffe received a strike force once more. By late October 1944, two groups of KG 26 Ju 88 torpedo-bombers had arrived—the first to be stationed there in nearly two years.\textsuperscript{92} In anticipation of the arrival of these forces, reconnaissance, which as already noted had been cancelled since April 1944, was recommenced in September. With the increasingly tenuous coastal supply line to northern Norway being subjected to Allied naval and air interference, JG 5's III and IV groups received an extra squadron each from Reich defence and by mid-December even night fighters were brought in to combat anti-shipping sweeps by Coastal Command—making the fighter defence in Norway stronger than at any time since 1940.\textsuperscript{93} In addition, 1944 saw a reorganisation of the air fleet's structure with the establishment of Fliegerführer 3 which covered some of the northern fields of its predecessor Fliegerführer Nord (Ost), including Petsamo, Kirkenes and Billefjord; Fliegerführer 5 based mostly at Tromsø and Vaernes; and Fliegerführer 4 covering the southern administrative and industrial heart of Norway with airfields stretching from Stavanger's Sola field to Kjevik at Oslo. Jagdfliegerführer Norwegen retained its old designation and had its fighters dispersed over Forus, Lista, Sola,
The results of this shuffling of resources and the transfer in of new units were, however, less than spectacular. Paralleling the failure to even dent the Anglo-American bomber raids of 1943-44 over Norway and the *Tirpitz* débâcle, attacking enemy convoys and preventing attacks on their own shipping in the winter of 1944-45 proved beyond the capabilities of these units.

The inability of the strengthened fighter units to protect their own vessels engaged in the provisioning and transfer of forces around Norway was particularly poor. Indeed, in November, 22 German ships were sunk and 19 damaged, and in the following month a further 13 ships were lost and 13 damaged. This greatly affected not only the movement of forces and their supply but the ore shipments from Narvik. It was estimated at the time that these fell from 40,000 tons in October 1943 to 27,000 tons in October 1944 and in November of that same year totalled an inadequate 12,000 tons. As Vizeadmiral Ciliax noted after the war: “At one time the situation along the open stretch of coastline between Kristiansand and Stavanger . . . was extremely critical.” Because of “constant heavy attacks . . . off the Norwegian coast”, explained Dönitz to Hitler on the first day of December 1944, “the time is not far off when ship movements in this region will come to a complete standstill.” Even in Oslo Fjord, the nerve centre of German rule in Norway, Coastal Command increasingly frustrated German efforts by dropping mines and attacking harbour facilities. For instance, on 2 March 1945 the Naval Staff war diary records that recent minelaying activities had incapacitated “50 per cent of the minesweepers”, while air attacks had destroyed important docks which in turn greatly hindered shipping in the fiord.

More importantly, Hitler wanted the most battle-worthy force in Norway, the 20th Mountain Division, moved south, for an eventual transfer across the Skagerrak to aid in the defence of the Fatherland. This did not mean that Hitler was about to abandon northern Norway, but rather, constituted a belated recognition that the final battle would be fought out in the heart of Germany, not in Norway. That he still found it difficult to reconcile his Norway obsession with the demands at his very own door can be seen in his contradictory response to Jodl’s (who had played such a big role in *Weserübung* in April 1940) recommendation of 11 March 1945 that the northern region be abandoned:

The Führer believes that if we vacated Narvik we might be providing Sweden with an opportunity to enter the war against us, since she would then have excellent connections with the Anglo-Americans. The Lofotens are also one of the most valuable Norwegian fishing areas, and they are important for our food supply. The Führer does not permit an evacuation of this area. However, he asks for suggestions how might troops be withdrawn from there so as to release troops for the home theatre of war.
Coastal Command’s activities were, however, not only a threat to the movement of this fighting force, but also to shipping carrying coal to Norway for use on the overburdened rail system which was needed to carry a good portion of the 20th Mountain Division’s 170,000 men overland to Oslo. Although the Germans had ample oil reserves, they lacked a good supply of coal. Therefore, in addition to the difficulties presented by the haemorrhaging infrastructure of the Reich, the Germans also had to consider obstacles presented by Coastal Command’s direct aerial attacks and indirect mining operations to the likely success of the operation. In the end, these factors proved insurmountable and the slow transfer ground to a halt in April.

Notwithstanding this depressing situation, there is a Luftwaffe defensive action worthy of special mention since it was one of the few occasions in the latter months of the war that the Luftwaffe secured a notable victory over the RAF, and in which the fighting spirit of the German fighter pilots rose above impossible odds. The German destroyer, Z 33, had been making her way south along the Norwegian coast from Trondheim to Bergen, when she entered Forde Fiord on 9 February 1945. Like all of the Germans’ remaining warships, Z 33 (a destroyer of the famous Narvik Class) was a prime candidate for Coastal Command’s attention. Once the destroyer was spotted on the morning of 9 April, a relatively large strike force, including three Beaufighter and two Mustang squadrons, was dispatched to attack the vessel and other ships sheltering in the fiord. The latter long-range machines were to provide much needed cover for the slower and somewhat more cumbersome Beaufighters. Realising that his ship had been sighted, the commander of Z 33 sought shelter deeper in the fiord and it was here that the enemy’s air units found her around 1600. Meanwhile, apparently warned by radar at 1550, 12 Fw 190s of JG 5 based at Herdla were scrambled to intercept the intruders. These squadrons led by Feldweben Rudolf Artner, with 17 victories to his credit, and Leutnant Rudolf Linz—a genuine ace who while based up in the Far North had amassed 70 successes—fell on the enemy soon after 1605. Artner described the first few moments of the battle in his after-action report:

At 1608 we made contact with approximately 30 Beaufighters and ten escort planes of the Mustang type. The squadron went to attack in formation. I was successful in getting behind and above one of the Beaufighters, and fired a long round. He began to burn at once and came down vertically approximately ten kilometres north-west of Forde at 1610. The pilot stayed in his plane.

The mêlée soon spread over a considerable area and in minutes Artner scored his 19th victory of the war:
I followed a Beaufighter at low altitude and fired two short rounds. The plane swerved a little off course and then after another round the plane went straight down and began to burn at once. This was approximately five kilometres north-east of Naustdal and the time was 1613.\textsuperscript{105}

By 1630 the battle was over. In some 15 minutes, the Luftwaffe pilots had shot down one Mustang and nine Beaufighters and 14 Allied airmen had lost their lives. But the fight had not been without its cost; of the four German fighters shot down, two pilots had been killed and one of these was Linz, the Luftwaffe’s highest scoring ace in Norway. Nevertheless, the operation had restored some pride to the Luftwaffe’s effort and was greatly welcomed by the Navy, who not only appreciated the successful defence of one of its few remaining ships but like everyone else, was grasping for any ray of light in the dark pit into which the Third Reich had descended; Dönitz wired Göring:

I am pleased with the great success of the Luftwaffe in Norway as it fended off aerial attacks against Destroyer Z 33 and the attack on the PQ convoy. I wish the successful fliers the best of luck in future fighting.\textsuperscript{106}

Luck, however, could not turn back the clock, nor could it change the increasingly impossible odds the Luftwaffe faced and, even though success here restored some pride to the beleaguered fighter units, and Z 33 was able to continue her journey in one piece. Nevertheless the Luftwaffe’s experience in Norway in the latter stages of the war was dismal overall. For example, despite the low numbers of aircraft in the region, the Kommandierender der Deutschen Luftwaffe in Norwegen (the air fleet had finally been downgraded to a mere Luftwaffe General in February) on 26 March had to turn down the transfer in of a coastal reconnaissance unit (KüFlGr 2/196) “since the air situation is characterised by almost daily intrusions by Mosquitos and Beaufighter units with fighter protection” and under these circumstances the slow German aircraft would be more of a liability than an asset.\textsuperscript{107} This decline in defensive abilities was equalled in the offensive achievements of the newly-arrived bomber force.

**Arctic Convoys and the End in Norway**

The arrival in October 1944 of KG 26’s torpedo-bombers was primarily to enable Luftwaffe General Norwegen to resume attacks on Arctic traffic. Obviously though, this was little more than wishful thinking since the small number available could do little to discourage the well-defended Allied ships from traversing the Arctic route in the last quarter of 1944. The attacks on Anglo-American convoys closely paralleled the disappointment of the fighters, and of the 159 Russia-bound vessels not a single one was lost in the second half of 1944,
while of the 100 returning westward only two were sunk. The failure of the nearly 70 Ju 88 torpedo-bombers, and the loss of nine U-boats, during these operations can be attributed to the very strong escort forces fielded and in particular the now ubiquitous presence of escort carriers. Nevertheless, the fact that they were able to operate at all given the squeeze on reserves was mostly due to the fact that although the Germans lacked sufficient quantities of coal in Norway, aviation fuel stocks, set aside for *Drohende Gefahr Nord*, were relatively plentiful. In the grand scheme of things the reserves were trifling, but in the context of the final months of the war were highly contested.

The exact amount of stocks available in early 1945 is unclear, but based on what is known of the levels in March 1945 and the rate of consumption of the air units in Norway at the time, they could not have totalled much more than 6-7,000 tons—about one-fifth of the Luftwaffe’s entire reserve pool of 25,000 tons. Since the beginning of January, OKW had been greedily eyeing this cache for use in the defence of the Reich. OKL’s war diary notes that the Armed Forces High Command made its play for the stocks (from which it had already successfully siphoned off an unknown quantity) on 13 February, by first stating enviously that the establishment of *Drohende Gefahr Nord* had resulted in “considerable fuel stocks being laid down in Norway”. The General Quartermaster (Generalquartiermeister) of OKW then called for a further transfer of fuel from Norway. Two days later, the issue was revisited and “by reason of the strained fuel situation in the Reich”, the General Quartermaster proposed that “out of the stored fuel stocks in Norway for *Drohende Nord* 2,000 tons be drawn off.” After an examination of the present situation, the Chief of the Luftwaffe’s Operations Staff determined that based on the current demands of the aircraft in Norway and because *Drohende Gefahr Nord* required a certain level of readiness at all times, he could not support further depletion of the stocks. The Luftwaffe’s own First Operations Officer was, however, more pragmatic and suggested that the best way around the current impasse would be to simply “do away with” some of *Drohende Gefahr Nord*’s demands since the fuel situation in the Reich simply did not permit unused stocks to remain outside Germany’s borders. “Furthermore, the intended transfer of reinforcement units to Norway [as per *Drohende Gefahr Nord*] would itself demand high fuel consumption”, argued the officer, “and in all probability during a real enemy landing would only arrive after the first decisive day.”

Whether the fuel was transferred or not is uncertain but a footnote in a Luftwaffe breakdown of the aviation fuel situation on 10 April suggests that it probably was not, since it points out that of OKW’s total 6,985 ton reserve, 2,000 still resided in Norway, perhaps
prevented from being transported to the Reich because of the considerable difficulties and risks now facing shipping in the region.\textsuperscript{114} Nevertheless, by the end of March 1945, \textit{Luftwaffe General Norwegen} still had 4,400 tons of the total 25,000 tons of Luftwaffe stocks on hand.\textsuperscript{115} This was far better than the reserves available to \textit{Luftflotte Reich} which virtually lived from hand to mouth. Aiding the favourable fuel situation in the Far North was, of course, the fact that with only three bomber groups flying at marginal strength due to declining serviceability, consumption rested at a low 12 tons per day. Although by 26 April consumption had reached 40 tons per day, there was no danger of the remaining 4090 tons being exhausted before the likely end of the war.\textsuperscript{116}

In the meantime, the New Year and ample fuel on hand brought no improvement to the Luftwaffe’s actual combat fortunes in Norway. Two attacks of note were made on the inward bound JW 64 and its homeward bound partner RA 64 in February, but only served to highlight the impotence of the Luftwaffe in the region. The first assault was attempted on 7 February by 48 aircraft including reconnaissance planes and KG 26 torpedo-bombers.\textsuperscript{117} Thanks to a radar failure on the shadowing aircraft, however, the strike force completely failed to make contact with the 24-strong convoy, but lost six aircraft in the process.\textsuperscript{118} In spite of the Navy crowing that the whole day’s work had been a “special occasion” because it represented the “first successful combat for a long time with a convoy in which the Luftwaffe also participated”, it really demonstrated that the Luftwaffe’s days as an effective force were long gone.\textsuperscript{119} Three days later, this abortive assault was followed by a 30-strong torpedo-bomber attack which took place in two waves. The anti-aircraft and fighter defences were too strong and despite the over-optimistic reports—claiming that one liberty ship and one destroyer had been “positively sunk”, another liberty ship “probably sunk” and a further cruiser, destroyer and merchant ship “damaged”—not a single ship had actually received a scratch.\textsuperscript{120} Although this demonstrated that the Luftwaffe crews had not lost any of their ability to greatly exaggerate their successes, it also highlighted, rather depressingly, the hopelessness of the situation. Neither the eight U-boats placed ahead of the convoy nor the Luftwaffe could effectively counter the strong escort force which consisted of two escort carriers, a cruiser and 17 flotilla vessels.\textsuperscript{121}

Further poor returns followed in subsequent missions undertaken by the small torpedo-bomber strike force in February and March. Luftwaffe operations against RA 64’s 34 returning ships by 35 Ju 88s on 20 and 23 February were characteristically unspectacular despite even grander claims. Overall, during the double convoy assaults in the third week of February the Germans had lost up to fourteen aircraft with only a single straggler, the
liberty ship *Henry Bacon*, to their credit—the last ship to be sunk by the Luftwaffe during the war. Further Arctic convoys continued and the Luftwaffe in Norway even got approval from the *Reichmarschall* for KG 26 to attack enemy traffic on Britain’s east coast, but air reconnaissance, such as it was, only made a belated sighting of the Second World War’s last east-bound Arctic convoy on 1 May.123

Yet the Luftwaffe was to suffer one final indignity before all was over. On the first day of May, after a couple of failed previous attempts, the Home Fleet sailed from Scapa towards the Norwegian coast in order to attack the Arctic U-boat flotilla supply ship and any other vessels present in Vest Fiord. The operation by a force made up of two cruisers, three escort carriers and seven destroyers was a great success: the carriers’ Avengers and Wildcats laid waste the German base facilities, sunk the supply ship and a small merchantman, and destroyed a U-boat.124 It was the last major sweep by the Home Fleet in the war and showed just how far the Luftwaffe had fallen. In 1940, the Royal Navy had been so knocked about by the Luftwaffe that it dared not venture into the waters off Norway for the next two years. Times had certainly changed. In May 1945, the Royal Navy and its aircraft demonstrated once and for all that Britannia had reclaimed the waves off Norway from the Luftwaffe.
When he came to power in 1933 Hitler had been relatively indifferent to including Norway in any future conflict and even at the outbreak of the Second World War, he had been keen to make known that Germany would respect all the Scandinavian nations' “integrity in so far as they maintain strict neutrality.” However, with the spectre of an Anglo-French Scandinavian operation in the offing Hitler grew increasingly determined to “safeguard” German interests and plans slowly advanced between December 1939 and March 1940 for an invasion of Norway. Notwithstanding some early reluctance, once the planning reached the final stage of development Hitler had become deeply interested in the project and after the campaign started, kept a close eye on events as they unfolded on his northern flank. Once firmly in his grasp, Hitler became increasingly obsessed with both protecting Norway from imaginary Allied attempts to wrest it from his control, and incorporating it within Germany’s post-war economic empire (supplying the victorious Reich with everything from iron ore and aluminium to fish and electricity). In addition to these economic and political aims, his Weserübung directive had foreseen that, strategically, Norway would not only provide the Navy with deep water naval bases such as Trondheim (Hitler’s future Nordic Singapore), but offer the opportunity to expand the available bases from which the Luftwaffe could operate against Britain. Certainly, the invasion of Norway on 9 April gave every indication that these designs would be realised.

Weserübung’s First and Second Phases: The Luftwaffe Triumphant
Although the performance of the Luftwaffe over Norway in the latter years of the war proved particularly dismal, in 1940—when Hitler launched Weserübung—it constituted a vital element in the German triumph and there was a good deal of truth in Jodl’s boast at the time that the “Luftwaffe proved to be the decisive factor in the success of the operation”\(^1\). Perhaps the most striking feature of Luftwaffe participation was the unprecedented airlift undertaken. On 9 April, the rapid deployment of paratroops and forces air-landed by transports enabled the Germans to capture in quick succession the widely-scattered airfields of Aalborg East and West, Fornebu, and Sola. At Oslo this was doubly important, because it permitted the Germans to march on the capital from Fornebu even though the planned
naval-bound occupation was delayed by the sinking of Blücher and Norwegian resistance along the fiord leading into Oslo. The continuing airlift enabled airfields to be brought up to operational readiness within a very short space of time—in some cases within hours—and became the main means by which the relatively weak German vanguard positions in central and northern Norway received reinforcements and supplies while overland communication links were slowly secured with Oslo. This was nowhere more vital than at Bergen, Trondheim and Narvik where naval supply ships had been decimated en route. In April alone, Galbanz’s 582 transports made a phenomenal 3,000 flights, of which 1,800 carried troops and 1,200 additional material. A breakdown of these flights reveals that a total of 2,370 tons of supplies, 29,280 men and 1,178,100 litres of fuel were delivered for the loss of 150 aircraft.

From these secured bases, in the second phase of Luftwaffe operations, X Fliegerkorps set about carrying out its main role: threatening the Royal Navy and thwarting Allied counter-landings. A good number of bombers had already participated in aerial displays over Danish and Norwegian cities and had crucially assisted the Navy on Weserday by repeatedly bombing defences within the Drøbak narrows, hastening the eventual arrival of German vessels in Oslo; and at Kristiansand where their support proved instrumental in the capture of the city. Yet in short time, the bulk of X Fliegerkorps’ bombers concentrated either on northern German airfields or newly-captured Danish and Norwegian fields in anticipation of Allied attempts to trap weaker German ships inside Norwegian fiords or undertake counter-landings. On the whole, the Luftwaffe was able to prevent either of these eventualities occurring in waters off southern and central Norway and the fright Admiral Forbes received at the hands of German bombers on 9 April and the lashing of Suffolk on 17 April had important repercussions. In the short term, the former event led to the cancellation of an attempt to eject the Germans from Bergen and an abandonment of the southern North Sea to submarines, while the latter led to the decision not to attempt a direct assault on Trondheim. In other words, for the first time in history air power had gained a clear ascendancy over sea power. At the time, many contemporaries observed as Jodl did:

The Luftwaffe has provided a proof, decisive for the future developments, that no fleet (however strong it may be) can operate in the long run within the close effective range of an enemy aircraft.4

Materially, though, the Luftwaffe’s tally for the entire campaign of one cruiser, six destroyers and sloops, a dozen smaller vessels and 21 merchantmen was hardly spectacular. Nevertheless, whether or not the threat posed by the Luftwaffe was more psychological
than real, the British were unwilling to test the waters by carrying out their proposed incursion into Bergen or the direct assault on Trondheim. Had they done so the Luftwaffe’s tally of warships sunk would almost certainly have been higher, especially if the latter had been able to deploy greater numbers of more accurate Ju 88s and especially the dive-bombing Stukas. It had been Stukas which inflicted most of the damage on Suffolk and on 3 May, sunk two of the destroyers escorting the British evacuation from central Norway. That they did not increase their tally rested on their small numbers and in the last phase of the campaign, the distance between Vaernes and Narvik.

Their effectiveness against warships operating without adequate air cover would be more than adequately demonstrated off Crete one year later where Allied naval losses soared to three cruisers and six destroyers sunk, curtailing evacuation of the island. Moreover, had the Germans been able to put torpedo-bombers into the air, the Luftwaffe might well have presented a still greater threat to the Royal Navy. As Taranto in November 1940, the attack on Pearl Harbor and the sinking of Prince of Wales and Repulse in December 1941 all graphically revealed, torpedo-bombers—whether carrier or land-based—had brought the age of the invincible battleship to an end. In 1942, the effectiveness of the torpedo-bomber was further underlined in the attacks on Arctic convoys PQs 16, 17 and 18 where torpedo carrying He 111s and Ju 88s were shown to be on average twice as deadly as high-level and dive-bombing aircraft. As part of this transitional process, the Norwegian campaign writes an early and significant chapter in the gradual appreciation of air power as a foil to sea power in modern warfare.

Moreover, there can be little doubt that German aerial superiority over central Norway was instrumental in bringing the Allied counter-operation to an end. Although, as at sea, casualties suffered at the hands of German aircraft on land were light, the Luftwaffe’s destruction of the Namsos and Aandalsnes bridgeheads, constant harassing of Allied ground troops, and regular attacks on communication centres made the whole operation untenable. With their enemy lacking anti-aircraft defences of any note, the Luftwaffe delivered the final indignity to the Allied expedition in central Norway when at Lesjaskog airfield it crushed the RAF’s woeful, short-lived attempt to achieve some sort of air power parity.

Weserübung’s Third Phase—A Grim Portent
Given the crucial role played by the Luftwaffe during the first and second phases of air war over Norway, it is perhaps not surprising to find that nearly all studies of the campaign have
ignored the fact that the third and final phase of the Luftwaffe’s contribution—running for a full month from early May until early June—was nowhere near as important as is generally assumed. Unlike southern and central Norway, Luftwaffe participation in the Far North could not be described—as Matthew Cooper did in his 1981 study of the German Air Force—as the “the decisive factor in the German victory.”\textsuperscript{55} At least four factors hampered Luftwaffe operations against the Allied forces facing Dietl’s beleaguered units. First, the Luftwaffe was limited to a single air base from which to launch the bulk of its missions. In marked contrast, during both the initial invasion and consolidation stages of the campaign, the Luftwaffe had enjoyed the continuous use of numerous well-serviced airfields within close proximity, encompassing Germany itself and subsequently occupied Denmark and Norway. This of course enabled a far greater number of aircraft to be brought to bear on any given target, affording the bombers the advantage of being able to substitute fuel capacity for increased payloads. Second, although Vaernes was the most northern Luftwaffe base, it still lay a considerable distance (some 650 kilometers) from Narvik. Consequently, the short-range but highly accurate Stukas remained unable to make any contribution to the action over Narvik until late in the battle. This meant that Dietl’s forces received less effective close air support than they might have otherwise expected, and that enemy naval vessels largely escaped the terrifying prospect of accurate dive-bombing attacks. Additionally, because of the distances involved, the longer-range, but less accurate, Heinkel and Ju 88 bombers were forced to make their sorties with only limited escort. Therefore, despite the presence of small numbers of Bf 110s, this left them at the mercy of British fighters at Bardufoss.

Third, the presence of the RAF at Bardufoss brought a measure of parity to the situation in the air over northern Norway, at least in the latter part of the campaign. Unchallenged for much of \textit{Weserübung}, the Luftwaffe had destroyed 93 of the 169 British aircraft lost thus far during the campaign. Of these, 43 were downed in aerial combat, 24 by flak and the remainder either destroyed on the ground or would be lost with \textit{Glorious}. Yet prior to the loss of these latter carrier-delivered aircraft, the two RAF fighter squadrons at Bardufoss rapidly turned the tables on the Luftwaffe and the contest for air superiority was renewed. Fourth, compounding these difficulties, and nearly always overlooked by later commentators, was the impact of atrocious weather on \textit{Luftflotte 5}. Over northern Norway in this period low cloud, rain and snow storms prevented the Luftwaffe making anywhere near the number of sorties it had in the previous month. During the crucial last 12 days of the campaign, the Luftwaffe could only bring its bomber forces to bear on the
enemy in the north on a miserly four occasions. This hardly qualifies as a significant contribution and since the Allies had already decided to leave the region on 24 May, it is clear that the Luftwaffe had very little influence on bringing about the eventual evacuation, despite what was believed at the time and glossed over later.

The Luftwaffe’s only real claim to fame in the Far North during Weserübung must lie with the tenuous lifeline it provided for the isolated German forces and at times a limited degree of what might loosely be termed close air support but more accurately battlefield air interdiction. As part of the German attempt to enable Group Narvik to hang on long enough for relief operations to be undertaken, the Luftwaffe gamely flew in supplies for Dietl’s forces whenever it could by aerial drops or by flying boats. Yet once again rain, and snow storms hampered any attempts to meet all Dietl’s demands for supplies or close air support, while the sporadic parachute drops of additional men were in reality a drop in the bucket compared to the Allied forces that closed in on the town. Consequently, Dietl’s claim that the “Luftwaffe proved the decisive factor in the success of the operation” is not as applicable to the final month of the campaign as it is for April. In the final analysis, the loss of France and Dunkirk in the West had much more of a say in the outcome of events in the Far North than the Luftwaffe.

No Piratenflugzuege for Wegener’s Siege of Britain

Yet both this third phase and earlier incidents in the campaign should really have set alarm bells ringing in the offices of the Luftwaffe hierarchy. Alongside the need to secure the safe and unimpeded transportation of Swedish iron ore via Narvik, the Norwegian campaign was touted by the Germans as providing much needed operational bases for the Navy’s warships and the Luftwaffe’s aircraft against Britain. This grand design never eventuated. For the Navy, the loss of a good part of their fighting power during Weserübung meant that they would never have the requisite forces with which to fully utilise their newly-acquired Nordic bases. Moreover, the British occupation of Iceland effectively reinstated the traditional scheme of a distant blockade, albeit running from the Shetlands through Iceland to Greenland (as distinct from its Great War predecessor which ran across the top of the North Sea to the southern Norwegian coast). For the Luftwaffe, Weserübung revealed that the Luftwaffe did not possess the necessary types of aircraft with which to utilise Norwegian airfields fully in the years ahead.

In order to exploit Norway as an advanced air and naval base, the Germans needed not only torpedo-bombers but more importantly, long-range aircraft for maritime warfare.
From the very onset of *Weserübung*, it rapidly became clear that neither the Luftwaffe nor the Navy possessed machines capable of covering the distances involved when Condors had to be brought in specifically to provide a modicum of support for warships and men isolated in and around Narvik. Although the Royal Navy had been driven from southern and central waters by the Luftwaffe, it was quick to seize the upper hand in the First and Second Battles of Narvik, comfortable in the knowledge that its warships were beyond the range of the Luftwaffe’s bomber force. Surely nothing reveals more the inadequacy of the German aircraft on hand than *X Fliegerkorps*’ desperate offer to send an entire bomber wing on a one-way flight to hit the British warships in the area. Even later, when Milch’s grand efforts in upgrading Trondheim’s Vaernes airfield were finally realised, the He 111 and Ju 88 simply were not suited to such missions without adequate air cover, which the Bf 110s were equally poorly equipped to provide. Hastily assembled Hurricanes and Gladiators operating from a ramshackle field north of Narvik were more than a match for these machines.

With the withdrawal of the Allied force from Narvik though, the inadequacies of the Luftwaffe were soon forgotten in the euphoria of victory here and in the West. But the problems remained. The directive for *Weserübung* had clearly stated that the invasion of Norway would provide the Luftwaffe with expanded bases for “operations against Britain.” The impossibility of ever achieving this was tragically laid bare only four months after Norway had been secured, when for the first and last time the Germans attempted to utilise bases in Norway as Hitler had originally conceived in his directive by participating in the Battle of Britain. Paralleling missions undertaken from Vaernes to Narvik, the distances from Sola and Aalborg to northern England were at the outer limit of He 111 and Ju 88 range and preclude adequate escort. Here, though, the similarities end because unlike over northern Norway where German aircrew had difficulty contending with one small RAF base precariously situated on foreign soil, over Britain they were up against Fighter Command’s large and carefully organised defensive system centred on radar and well-equipped fighter units. Such was the subsequent blood-bath suffered in the course of this single mission, that never again would *Luftflotte 5* sally forth in daylight raids against Britain.

As soon as it became apparent that Norway could not be used as a major Luftwaffe base for aerial assaults on the British Isles, *Luftflotte 5* was stripped of its bombers and from a peak of approximately 650 combat planes in May 1940, Stumpff could call on barely 50 such aircraft by December. Unable to call on a long-range heavy bomber, which could have comfortably operated from Norway in conjunction with the raids taking place on southern
England from France, the Germans were unable to snap the back of Fighter Command’s defensive network, which in August 1940 reached breaking-point with regard to the availability of machines and pilots. Had the Germans possessed a machine able to appear anywhere over the British Isles at high altitude, it might well have dealt a fatal blow to British resistance.

The importance of Norway and the four-engine bomber to the naval war was potentially even more important. Wolfgang Wegener had originally believed that Norway was a vital component in a maritime “siege of Britain”. Yet, like many of his contemporaries, he mistakenly assumed that the surface warship would prove the means to achieve this. In reality, it is now clear that the U-boat supported by aircraft offered the Germans their best opportunity to win the war at sea. Working together against the sea lanes supplying Britain’s war industry, the U-boat and the long-range aircraft operating from France and Norway would have afforded the most efficient means of locking the British Isles within a deadly embrace. As it was, with a small number U-boats and even fewer Condors in 1940 and 1941, the Germans showed what would have been possible with much greater numbers of each. In particular, the potential of a fleet of 200 to 300 purpose-built Piratenflugzuege was demonstrated clearly when, with a small number of converted airliners, the Luftwaffe sank no less than 500,000 tons of shipping in 1940 and a further one million tons in 1941.

Much of the blame for entering the war without such an aircraft must be laid at the feet of one man: Hermann Göring. Vain, boastful and covetous, the head of the Luftwaffe and the second most powerful man in the Reich was the four-engine bomber’s nemesis. His decision to stop production on both the Do 19 and the more promising Ju 89 in 1937 put German development in this area back at least four years. The potential of the Ju 89 in particular, was ably demonstrated when its air transport derivative, the Ju 90, worked alongside the Condor in support of Dietl’s mountain troops in Narvik. The demise of the Do 19 and Ju 89, however, did not spell the end of the development of an aircraft capable of maritime work, as the four-engine long-range bomber baton was passed on to the ill-fated He 177. Although Udet must take a good deal of the blame for the He 177’s failure to meet expectations, Göring’s incredulous cry in 1942 that “it need not be able to dive” came years after the ludicrous decision first had been made. Whether, as this implies, he truly was unaware of this situation or failed to reverse it at the time due to inattention, his patent and continued negligence meant that Germany entered the war poorly equipped to establish a blockade of Britain.
Göring’s failure to develop such an aircraft, his fighting with Raeder over the Naval Air Arm and his failure to adequately address the needs of maritime warfare all reveal that he was generally strategically illiterate and particularly ignorant of matters nautical. This was appreciated early in the war by Milch when, in an effort to explain to Göring the importance of Norway to Germany’s future world position, he was compelled to present his commander with a copy of Wegener’s Die Seestrategie des Weltkrieges. Nevertheless, despite his strategic deficiencies, Göring was all too aware that his position and that of the Luftwaffe were dependent on the patronage of the Führer, and for the most part it was from Hitler that he took his lead.

Ultimately, it was with the Supreme Commander of the Wehrmacht that the shaky foundation for the war at sea rested. Because of Hitler’s over-emphasis on a continental strategy, bolstered by his mistaken belief that a war with Britain could be avoided, Germany never pushed forward with any great energy the development of a substantial surface fleet or—more importantly—a strong U-boat arm. Likewise, Hitler’s land-based focus meant that not only was the Navy not ready for the ensuing war at sea but the Luftwaffe was also caught short. The overall strategic focus of the Luftwaffe followed a continental bent as an ancillary of the Army in any future conflict within Europe. In light of this, the Luftwaffe for the most part developed aircraft suitable to this task, namely dive-bombers and twin-engine medium bombers. However, with the likelihood of a war with Britain more on the cards than ever in the wake of the Czechoslovak crisis of May 1938, reports produced from Luftwaffe manoeuvres designed to ascertain Germany’s technical and tactical shortcomings in an aerial campaign against Britain made sobering reading. In part, they indicated that without forward bases in Holland and Belgium, the Luftwaffe would not be ready to hit at Britain until 1942, by which time four-engine bombers should be available.

While Göring scrambled to rectify his ill-considered ditching of the four-engine bomber programme by pursing the He 177, Hitler remained totally oblivious to the larger implications of these findings to his proposed invasion of Norway in 1940 and subsequent operations from there. Although in October 1939 Raeder had stressed that to utilise Norway best the Luftwaffe still needed “suitable types” of aircraft, Hitler showed little cognizance of the fact in his directive for Weserübung. In determining that Norway would “provide the Navy and the Luftwaffe with expanded bases for operations against Britain”, the Führer failed to appreciate that captured bases, no matter how good, were essentially redundant without the long-range aircraft to fly from them. Thus, in April 1940, the failure of Hitler and Göring to address the needs of maritime warfare adequately in their long-term
pre-war strategic planning, fatally hamstrung Germany’s efforts in the war at sea and in particular the exploitation of Norway as a base for long-range aircraft working in close co-operation with U-boats. Yet not only did Hitler fail in his tasks here but after having embarked on the conquest of Norway he was unwilling to set in place a command structure that would facilitate the optimum use of what Luftwaffe and naval resources were deployed in the area, namely the establishment of a joint operations staff under a single theatre commander.

The Cost of Divided Command

Even without the long-range aircraft which could have operated from Norway in conjunction with U-boats to seal off the north-western approaches to the British Isles in the Battle of the Atlantic, the Germans did have medium bombers suitable for operations in the less expansive waters of the Far North. Nevertheless, Germany’s inability to co-ordinate its resources in this region effectively against Arctic convoys stems not only from the atrocious weather conditions prevailing in this bleak area, but also the failure to establish a unified command prior to the invasion of Norway and in the years that followed—because beneath the success of *Weserübung* dwelt the insidious canker of inter-service rivalry. Although the invasion of Norway had shown that Blitzkrieg warfare could more than compensate for a poor command structure, once the element of surprise had diminished and Germany’s military machine began to stretch visibly over several fronts after the invasion of the Soviet Union in mid-1941, a major restructuring of the command organisation was needed to co-ordinate effectively the declining capacity of the German armed services in the face of a corresponding improvement in the Allied ability to wage war.

In many ways, the German command structure for the invasion of Norway resembled the Allies’ chaotic model in 1940: it lacked a unified joint operations staff with a single commander responsible for directing the battle in the field. Before and during the campaign, the fierce inter-service rivalry that existed between the three German armed forces meant that at the highest level co-operation was given only grudgingly at any one time. This was revealed in *Gruppe XXI*’s after-action report for *Weserübung*, which stressed that any future operation involving the three armed services must be undertaken with a single commander who, along with his personal staff, operates “without restrictions” to ensure a frictionless and uniform command. Of course this never occurred, and strident inter-service rivalry continued to bedevil German operations throughout the war. This was
certainly true in Norway after the successful completion of the campaign, as Falkenhorst declared at his war crime trial:

In the inter-relation of commands no change was made; until my recall [in December 1944], the system that I was to collaborate with the respective Commanders-in-Chief regarding Navy and Luftwaffe questions remained in force. . . . I was in fact, however, only *primus inter pares*, since the Navy and the Luftwaffe remained under Raeder and Göring . . . and always took great care that their position as independent parts of the Armed Forces (*Wehrmacht*) should not be assailed. 8

Yet in spite of this hostile climate, success here and elsewhere occurred because spats between Göring, Keitel, and Raeder and their immediate minions were greatly ameliorated in the field at a lower level, where, more often than not, service parochialism was set aside in order to get the job done. *Gruppe XXI*'s report reflected on the remarkable degree to which this had been achieved in *Weserübung*:

That the commands and troop contingents of the three armed forces branches worked together almost without friction cannot be credited to purposeful organisation of the commanding staff. It was, instead, entirely an achievement of the personalities involved who knew how to cooperate closely in order to overcome the inadequacies of the organisation.9

In this regard, the Luftwaffe was particularly blessed with a number of resourceful and competent personalities who not only were able to function alongside their Army and Navy counterparts but carried out their Luftwaffe duties with a great deal of skill. Both Geisler and Gablenz worked together extremely well in order to facilitate the close cooperation of their combat and transport aircraft in a campaign in which operational and logistical requirements were closely intertwined. In the front lines, the Luftwaffe was ably served by the two aggressive Fliegerführers in the persons of Harlinghausen and Fuch. Harlinghausen in particular had a hands-on approach to operational command and in central Norway often flew reconnaissance missions himself. Lower ranks also exhibited a great degree of initiative and an ability to improvise to achieve the required results. Confronted with appalling weather and the sinking of Blücher, it was only Hauptmann Richard Wegner's determination to press on to Fornebu with his Ju 52s—in contravention of an order to return to Germany—and the quick thinking of Oberleutnant Werner Hansen, who, with a handful of his Bf 110s, secured the airfield for the incoming transports, which enabled the Germans to occupy Oslo on 9 April. The resourcefulness of junior Luftwaffe commanders was demonstrated on a number of occasions and perhaps no more so than in the first systematic use of Stukas over the open sea against fleeing Allied warships and troop-laden transports on 3 May. Lacking adequate navigational instruments and training
to locate the Allied fleet, the *Fliegerkorps* hit on the idea of deploying coastal reconnaissance floatplanes as guides for the Stukas, resulting in the sinking of two destroyers.

Milch and Stumpff as successive leaders of *Luftflotte 5* have come in for a good deal of criticism from contemporaries and post-war critics yet each proved capable commanders in their own way. Milch, in particular, during his brief stint as the air fleet’s commander has been described as the “half-Jewish Nazi” who “wanted his command time, but . . . did not want to actually leave Germany”, and a commander who failed to make any significant contribution to the “operational direction of the campaign”. In part, this stems from unfavourable opinions held by his contemporaries but also from the fact that it does appear that he did not play a great part in the actual tactical deployment of the aircraft under his command. Nevertheless, oversimplified analyses of his performance fail to take into account Milch’s contribution in other areas which were vitally important to the Luftwaffe’s fight over Norway.

Although he was clearly reticent about leaving Göring’s side, this should not be taken—as many historians have asserted—as indicating Milch’s lack of enthusiasm for the task at hand. On the contrary, during his sojourn in northern climes, Milch attacked organisational and administrative problems with his customary vigour: between 16 April and 1 May, he made 15 flights to airfields in Denmark, southern and central Norway, clocking up over 4,500 kilometres in the process. Whilst commander of *Luftflotte 5*, Milch visited Oslo’s Kjeller and Fornebu fields five times, Sola and Vaernes twice each, and Kristiansand and Aalborg East and West once each. Given the distances involved, it is no wonder after a particularly hectic day he could refer to a one-hour trip from Sola to the capital as merely the “Stavanger-Oslo hop!” During these visits—lasting on occasions only a few hours, but more often than not requiring at least an overnight stay—Milch’s diary reveals that he went through the whole gamut of front-line experiences. In this respect he was no different from a good number of field commanders: Milch had the opportunity to sample some of Norway’s finest hotels; he had at least one big fight with a stroppy front-line *Fliegerführer*, was forced to dodge bombs at Sola, and received more than his fair share of harassment in the form of late night telephone calls and the odd “idiotic telegram” from Göring. During an admittedly brief spell in Norway, he dramatically improved the communications network and set in place the groundwork for the creation of new fields and the upgrading of current fields, such as Vaernes, as well as the necessary infrastructure to achieve this. Clearly, Milch was more than just “punching his ticket” and at least for his administrative and
organisational effort he deserved his Knight’s Cross as much as Harlinghausen did for his front line leadership. Later in 1942, Hitler reminisced with Speer and a handful of officers about how when the situation was at its darkest in Norway in 1940, and all appeared lost, Milch had stepped into the breach: “And why? Because here was a man like me, who just did not know the word ‘impossible’.”

Milch’s replacement, Stumpff, was faced with the very difficult task of supporting Dietl’s isolated forces in and around Narvik. Although his Army background did not win him any great support from his subordinates and his decision not to place greater weight on attacking Bardufoss was understandably unpopular among airmen, what can be said with some assurance is that Stumpff did have a greater appreciation of the overall situation than some of X Fliegerkorps’ commanders at the time. An examination of the evidence has shown that Stumpff’s decision to attempt to support directly Dietl, as opposed to Kessler’s demand that they strike at Bardufoss airfield, was—given the importance of buying time for the relief projects—the right decision at the time; even if the results were less than impressive and it went against the conventional wisdom of aviation purists. That Stumpff was an ex-Army officer who could not grasp the essentials of air warfare was not only untrue in May 1940, but would be fully disproven by his astute leadership of the Luftflotte in the years ahead.

Subsequently, in particularly gruelling and frustrating circumstances, Stumpff weathered the siphoning off of his forces at the end of Weserübung and the stripping of its remaining bomber force after the blood-bath of August 1940, only to see the force he had built up for attacks against PQ convoys in 1942 once again plundered for the Mediterranean and thereafter slip into relative oblivion. His courage and ingenious use of limited resources was epitomized in his determination to bring all his forces to bear on Arctic convoys. The various Fliegerführer were organised in such manner that at any one time the largest possible attack force in the region could be brought into action, while coastal scouting squadrons performed an important dual role as sea-rescue units after they had fulfilled their reconnaissance tasks. Stumpff was also strongly parochial and given the forces available, was prepared to back his units whenever he felt they offered the best means of crushing enemy forces, and on the whole his co-operation with local U-boat commanders appears to have been well received. His achievements in working with negligible forces in extremely difficult circumstances were obviously appreciated in Berlin and doubtless influenced the decision to transfer him out of Norway in 1943 for an equally unenviable task: the air defence of the Reich. Nevertheless, his strong Luftwaffe parochialism, characteristic of so
many officers of all services, although in itself not unhealthy (doubtless winning over many previously antagonistic airmen), actually represented one of the hindrances to Germany utilising Norway efficiently. While speed, surprise and weight of numbers all helped to carry the day throughout *Weserübung*, the failure to establish a single command for the theatre was a glaring weakness in the years that followed.

The biggest impediment to establishing a combined command in this region, and other theatres, was the man who had cancelled the four-engine bomber programme in 1937 and was determined to control all that flew, Hermann Göring. With regard to the invasion of Norway, he pompously proclaimed to the International Military Tribunal at his trial in 1946: "I could only take a very definite stand against this undertaking." He frankly admitted expressing his opposition in an "unmistakable and unfriendly fashion" for no other reason than he had been informed too late of the impending campaign and rather lamely that the "plans did not seem quite right to me." In reality though, Göring had not even wanted his air units deployed in Norway, especially after Hitler took the planning for the campaign away from the Luftwaffe, and initially placed them under the command of Falkenhorst. Göring's petulance and overriding Luftwaffe bias, which effectively spelt the death-knell for any hope of a unified command in the invasion, must be considered his second greatest failing regarding *Weserübung* and Norway in following years.

Yet Hitler, who had a propensity for interfering at every turn, was unprepared to intervene on the one issue that could have made a difference to the fighting in Norway: he was unwilling to rein in his second-in-command. The continual squabbling between the Luftwaffe and the Navy in Norway could easily have been settled but for Hitler's unwillingness to put the Reichmarschall in his place. As Hitler pointed out to Erich von Manstein, who after the tragedy of Stalingrad suggested the establishment of a chief of staff with authority over all three branches in Russia, Göring, as Germany's only Reichmarschall, would never submit to anyone's authority but the Führer's. Unable, or perhaps more accurately unwilling, to rein in his recalcitrant Luftwaffe Chief, Hitler simply let the inefficient and often corrosive dual command structure remain in Norway as he did in other theatres. In many ways, the fragmented command structure pervading the German military machine suited Hitler's predilection for meddling and when necessary allowed him to step in as the final arbiter when particularly bitter feuds broke out.
Hitler the Meddler

The Führer’s penchant for playing the omniscient warlord was more evident in the invasion of Norway than is usually recognised, with the campaign revealing a number of disturbing tendencies in Hitler’s leadership that would ultimately prove fatal. Not only had he collapsed at the very first crisis which appeared, but throughout *Weserübung*, he revealed a propensity to meddle persistently with even the smallest of operational details. Potentially the most important incident occurred after the Second Battle of Narvik when it appeared that the British were about to land and take the town itself. Only Jodl’s firm hand, despite a flurry of unrealistic demands made by Hitler, prevented the premature loss of the northern iron ore port. If anyone in high command deserved praise it was Alfred Jodl, who—despite his post-war image as a Hitler sycophant—prevented the campaign going badly awry when Hitler cracked under the strain of command.16 As Nikolaus von Below, Hitler’s Luftwaffe adjutant, observed, Jodl openly made his opinions known to the Führer and to a large degree carried Hitler through the campaign’s most difficult periods.17

Nevertheless, had Dietl’s force been ordered over the Swedish border—as Hitler frantically demanded—prior to the invasion of the Low Countries and France, it is possible that the Allies could have secured an extremely strong foothold in the two months prior to Dunkirk; a foothold they might have decided to retain once firmly established there. From here, they might have continued the fight since the Germans would have had great difficulty dislodging them, given the distances involved, the terrain and the Royal Navy’s relative mastery of the Far North. Persuaded not to make a premature withdrawal from Narvik, Hitler nevertheless continued to leave his personal mark everywhere—at least until he was distracted by the even greater excitement of his invasion in the West. Seemingly, no matter was too small for the Führer’s personal attention, as demonstrated in his transfer of the Transatlantic Squadron to the theatre and a pioneer detachment to Trondheim in late April. While many of these decisions were fairly innocuous in nature and often beneficial to the overall effort, when combined with a little pressure, his propensity to interfere could produce tragic results. Nowhere was this more evident than in the ill-fated Dombass drop in mid-April. Overreacting to the Allied landings at Aandalsnes and Namsos, Hitler once again panicked, and, without giving due consideration to meteorological and logistical factors, demanded that the Dombaas rail junction be secured. In addition to completely failing to fulfil their mission, 115 of the 160 men deployed were lost. Although these cracks in the façade of the German warlord’s abilities were papered over by the eventual success of
the campaign, they would be tragically exposed on the Russian front where the stakes were much higher.

Hitler’s habitual meddling tendencies, coupled with his unwillingness to bring the Reichsmarschall to heel, go some way to explaining his unwillingness to establish a joint command to facilitate the most effective use of resources on hand, because it would have impinged on his own freedom of action and meant ruffling the feathers of his most volatile subordinate. Thus Hitler never went any further than toying with the idea of assigning a supreme commander for the Norwegian theatre, even though this made a lot of sense at the time. And while Germany was engaged in limited Blitzkrieg campaigns in the early stages of the war, the prevailing flawed command structure never significantly impeded success. As the war, however, gradually began to take on the form of a multi-theatre conflict engulfing not only western and northern Europe but the Mediterranean and ultimately the vast Soviet Union, Hitler’s ability to personally oversee operations in all these areas rapidly declined. Without a joint command to direct and co-ordinate the Luftwaffe and the Navy in Norway, coupled with a dissipation of strength and focus over many fronts, it is not surprising that tragic consequences followed.

This was no more evident than in raids against Arctic convoys in 1942. With the element of surprise well spent and the Allies rapidly regrouping under a united banner, the Germans needed to bring their forces together under one commander to sever the flow of valuable war materials over this northern sea route to the Soviet Union. It was at this point that Kesselring’s name was thrown into the ring a second time as a possible supreme commander and once again this proposal was never implemented. Although on the surface, Kesselring appears an admirable candidate for such a position, doubtless resistance from the Navy which was unwilling to place its remaining precious big ships, squirreled away in Norwegian fiords, in the hands of an airman stymied this initiative. Despite the fact that Kesselring was one of his own men, Göring also was unlikely to support such an appointment inasmuch as he probably foresaw himself being sidelined by such a move, since it would give OKW the upper hand in controlling his precious air units in the region. This very same reasoning thwarted an effort by senior naval officers in Norway to have a single commander appointed to the region in 1943. Although the proposal envisaged a Navy man filling the post, the Naval Staff also baulked at the prospect of losing any say over their naval units to OKW.

Of course, even if Hitler at this point had been inclined to bang a few heads together to bring about a unified command, his own leadership style would have made any such
commander’s life extremely difficult. This was ably demonstrated by the experience of the twice-mooted leader for Norway, Kesselring, who came closest to becoming a true active combat theatre commander when he was appointed Commander-in-Chief South in December 1941 and landed with the task of achieving air and sea superiority in the Meditareanean. Although this ostensibly placed him in charge of all Axis forces in the region, not only did he have to contend with the Italian High Command, but Rommel in Africa and the great meddler himself, Hitler. Thus even if Kesselring had been appointed Commander-in-Chief North, with control over Luftwaffe, Navy and Army forces in Norway he would still probably have had to deal with Germany’s Supreme Commander of the Armed Services and a number of bellicose senior airmen and sailors.

Nevertheless, the hopelessness of the situation as it actually stood in 1942 was no better illustrated than by the acrimonious argument that broke out between Luftwaffe and Naval Staffs over the use of bombers for reconnaissance duties during Rößelsprung. In planning for the attack on PQ 17, the Navy were desperate to avoid a repeat performance of the March 1942 débâcle which nearly saw Tirpitz lost in conditions depressingly similar to those which claimed her sister ship, Bismarck, in May 1941. Therefore, they made a point of requesting that the Luftwaffe divert strike aircraft to scouting duties during the big ship’s operation. Aside from once again revealing the inadequacy of the numbers and types of aircraft available for reconnaissance duties, the contentious squabbling that resulted showed neither the Navy nor the Luftwaffe were able to work harmoniously for a common good. Although, as during Weserübung, officers at the lower level achieved a degree of successful co-operation between U-boats and aircraft, at the highest level, where the operations where planned and directed, the lack of co-operation was painfully evident.

In the pre-Rößelsprung preparations, the Navy had argued vociferously for the Luftwaffe to take a back seat in the operation and use its bombers in lieu of dedicated reconnaissance aircraft, while Stumpff was equally adamant that he did not want his limited air units expended on such a secondary role when they could, and should, be at the forefront of the battle. Only the intervention of Hitler brought the argument to an end in favour of the Navy, though even with total Luftwaffe support the insufficient number of aircraft available to the task at hand never provided Raeder with enough confidence for implement Rößelsprung. Thus Stumpff got his way in the end anyway, and, after the British Admiralty unwisely ordered the convoy to scatter, his air units (working in tandem with U-boats) were able to pick off the hapless vessels one at a time. Notwithstanding the
eventual success of the attack on PQ 17, the fracas surrounding the convoy assault highlighted the serious inadequacies of the German command structure.

The Turning Point in the Far North

Operationally, PQ 17 and subsequently PQ 18, represented turning-points in the drama playing itself out in the air and at sea in the northern theatre. Until this time, Germany even with its declining resources, had held, if not the actual advantage, a psychological ascendency over the British due to the pasting they had suffered during Weserübung. Even though the falling strength of the Luftwaffe in the region, the Navy’s unwillingness to risk remaining big ships and the flawed dual command structure all ensured that the actual offensive potential was never fully realised, the aura of the Luftwaffe coupled with the presence of these vessels had been enough to safeguard the defensive integrity of Germany’s position in Norway. Superficially, the attack on PQ 17 suggested that this British fear of German air power was justified. In co-operation with U-boats, Stumpff’s air fleet had played a significant part in the destruction of two-thirds of an Arctic convoy. In many ways, PQ 17 represented what “might have been” in a genuine “siege of Britain” had the Luftwaffe been able to deploy a sufficient number of aircraft to the Battle of the Atlantic. For it was in the years before 1942, well in advance of the introduction of heavily escorted convoys and when enemy air cover was almost non-existent, that long-range anti-shipping aircraft operating from both Norway and France and working hand-in-glove with Dönitz’s U-boats, could have achieved a stranglehold over the British Isles.

Nevertheless, the fact that success in the war at sea was in the process of passing out of Germany’s grasp was demonstrated in the following assault on PQ 18. Just as the establishment of an interlocking convoy system, a Mid-Ocean Escort Force group, increasing use of long-range aircraft and more effective anti-submarine technology was turning the tide against the Germans in the Battle of the Atlantic, the heavily escorted PQ 18 broke the spell of Luftwaffe ascendency in the Far North. Even though the Luftwaffe increased its torpedo strength in Norway in anticipation of the next Arctic convoy, the Allies pulled out all the stops to prevent another tragedy on the scale of PQ 17 by providing the convoy with an extremely strong destroyer force and air cover from a dedicated escort carrier. This latter factor proved decisive in the end, and although Luftflotte 5 was able to sink 13 ships during a number of attacks, the escort carrier’s Sea Hurricane fighters coupled with the destroyers’ heavy defensive fire led to the loss of 44 German bombers—nearly one-sixth of the air fleet’s strength. Whether the Luftwaffe would be able to counter these
Allied measures in subsequent anti-convoy operations we shall never know because with the Anglo-American landings in North Africa, Luftflotte 5 lost nearly all its strike force to the Mediterranean and convoys were suspended until the New Year.

The poor relations between the two staffs and problems associated with communications, plus a fall in the operational strength of the air fleet in Norway reached their nadir when Scharnhorst put to sea in December 1943 to attack another convoy. Göring had been unwilling to transfer in aircraft from other hard-pressed fronts and Stumpff was forced to provide reconnaissance support from the meagre forces available, although he had to confess that he could not guarantee coverage. Remarkably, despite particularly foul weather the Luftwaffe got planes airborne and actually picked up on radar what appeared to be an enemy fleet detachment in the area, including a possible capital ship. It was at this juncture that the twin command structure and poor communications network which snaked its way up and down the country effectively brought about the demise of Scharnhorst. The report of a possible capital ship never made it to the battle-cruiser and once the trap was sprung, the radar-equipped British ships including Duke of York detected, tracked and eventually sunk the ship. Notwithstanding the Royal Navy’s prowess and technological advances, the loss of Scharnhorst was the direct result of insufficient numbers of aircraft suited to maritime reconnaissance and the lack of a joint staff under a single commander in the region to co-ordinate combined operations. As if in complete acknowledgment of its failure, by April 1944 Luftflotte 5 abandoned even the pretence of a limited reconnaissance capability by refusing to authorise any support for the Navy and aside from a brief period of activity in the final months of the war, the air fleet’s war against convoys was over.

Overall, even when the hammering inflicted on PQ 17 is taken into account, the Allies could claim that the Arctic convoys had proved remarkably successful. Between December 1942 and May 1945, these convoys delivered a massive 4,964,231 tons of equipment and materials including 5,218 tanks, 7,411 aircraft, and 4,932 anti-tank guns. Although of the global total sent to the Soviet Union of 16,366,474 tons the Persian route accounted for the largest share, the Arctic route accounted for nearly 23 per cent and early on in the war it was by far the most important as it was the most direct and quickest path through which urgent supplies could be sent to bolster the hard-pressed Soviets until post-Stalingrad. Of the 811 merchant ships dispatched with this valuable war material, 720 reached Russian ports, while 33 were forced to turn back for various reasons and 58 lost. Of those 715 making the return trip, only 29 were lost. Taken together, these figures not
only reveal the success of the convoys and the huge amount of material delivered, but point
to a serious failure in German efforts to stop them.

The main reason for the termination of aerial reconnaissance from Norwegian
airfields was not due to a lack of fighting spirit among the German aircrews, but simply
reflected an on-going decline in operational strength which had begun as soon as
Weserübung came to an end. In May 1940, the air fleet had boasted 700 aircraft, but within
three months most of its strike force had been sent south due to their limited operational
range for operations against Britain; with 175 combat machines on hand, it ceased to be a
Luftflotte in all but name. Furthermore, after the heavy losses of 15 August, Luftflotte 5
was soon stripped of its remaining four bomber groups. Although the air fleet was
bolstered for attacks on Arctic convoys to 264 aircraft in May 1942, the losses suffered
against PQ 18 and the subsequent transfer of many bomber units to the Mediterranean
meant that by mid-1943, Stumpff once again had only 170 combat aircraft at his disposal.
By this time, the Germans did not have sufficient reconnaissance aircraft to cover Norway’s
2,500 kilometre coast and bombers to hit at passing convoys, let alone an adequate fighter
force. A rapid decline in fighter numbers in the latter half of 1943 as they were transferred
to Germany for home defence or the Eastern Front meant Luftflotte 5 would find itself
completely unable to stem the tide of Allied bombers which appeared increasingly over
Norway.

The Anglo-American bomber raids during 1943-44 hit directly both at Hitler’s
economic dreams for Norway and shamed the defensive fighter force based there. For
example, the American raids on 24 July, and 16 and 18 December 1943 were undertaken at
low altitude without long-range fighter support, conditions which would have been suicidal
over the Continent. The results of raids against newly-constructed aluminium, magnesium
and nitrate factories at Heroya, the Trondheim U-boat pens, the Vermork power station, the
electrolysis plant at Rjukan, the molybdenum mines at Knaben and the Olso-Kjeller aircraft
factory were mixed. At Heroya for example, the bombers effectively shut down the plants
for the rest of the war, while the U-boat pens’ thick concrete remained impervious to
repeated Allied bombing. The 60-70 fighters on hand in mid-1943 to meet raids of up to
100 bombers at a time and on one occasion over 300 machines, faced a well-nigh impossible
task, especially when the effects of servicing and repairs on the operational strength of the
defenders and the size of the theatre is taken into account. Often intercepting bomber
formations in ones and twos, the German fighters seldom pushed home their attacks. The
results make sorry reading. When Bomber Command’s considerable effort (excluding
minelaying missions) is added to that of the Eighth Air Force, the Allies flew over 1,500 sorties over Norway for the loss of less than 30 machines. And of even this small number of casualties, most fell to flak rather than fighters. By 1943, the Germans simply could not justify transferring in further fighters for Norway when home defence was crying out for greater resources. In the end, this crushed Hitler’s economic hopes for Norway within the Reich’s expanding economic sphere and as a final blow brought about the loss of some 1,000 lives with the sinking of *Tirpitz* in 1944.

Despite this appalling showing in later years and the fact that should an actual Allied expedition take place, the air defence of Norway rested with a “paper air force”, Hitler’s determination to retain Norway did not wane, even in the twilight of the war. Although the approximately 300,000 troops stationed there in the latter months of the war would have been far better deployed on German soil in defence of the Reich, he was not be prepared to give up his Nordic base, reasoning, as the Red Army bore down on Berlin, that it should be retained not only to prevent the Swedes from entering the war on the Allied side but also because of its importance as an invaluable source of fish. In general though, Norway failed to live up to its billing as a base for aerial operations against Britain almost as soon as the Germans secured the country. Although in April 1942 Hitler declared that the invasion of Norway had been one of the two most decisive events so far in the entire war—the other being the defensive battle outside Moscow during December 1941—because control of the Norwegian coastline enabled his forces to launch attacks on northern Britain and Arctic convoys to the Soviet Union, in reality the results were far from spectacular. Despite *Luftflotte 5*'s brief period of glory against PQ 17, Norway very quickly reverted to a strategic backwater, the retention of which reflected more the Führer’s obsession than pressing military reality. In the end, where the Luftwaffe and Navy are concerned, not only were the strategic opportunities offered by the Norwegian invasion never realised, but later as tactical efficiency was beset by shrinking forces, bitter inter-service feuding and high command interference, they never received the priority they deserved in what was one of the Second World War’s most demanding theatres.
NOTES

Chapter 1


3 M. Domarus, Hitler: Reden und Proklamationen 1932 bis 1945. Teil II Untergang, Bd. 2 (Leonberg: Pamminger and Partner, 1988), p. 1385. However, it should be remembered that the Danes had signed a non-aggression pact with Germany on 31 May 1939.


9 Emphasis in the original. Fuehrer Conferences on Matters dealing with the German Navy (Wilmington, DE: Scholarly Resources in co-operation with the US Naval Historical Center, 1983), 23 September 1939; NB in many documents from this period “England” is synonymous with “Britain”. Therefore, for clarity and consistency I have changed these were applicable to “Britain”. Likewise, nearly all references to the “German Air Force”, or “GAF” in English translations of primary documents and secondary works have been replaced with “Luftwaffe” throughout.

10 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, (Wilmington, DE: Scholarly Resources in co-operation with the US Naval Historical Center, 1984), 2 October 1939;

11 Kriegstagebuch der Seekriegsleitung, 3 October 1939

12 The best discussion of the strategic significance of Scandinavia to German planners in the late nineteenth and early twentieth century is provided by C. Gemzell in two meticulously documented works: Raeder, Hitler und Skandinavien: Der Kampf für einen maritimen Operationsplan (Lund: CWK Gleerup, 1965), and Organization, Conflict, and Innovation: A Study of German Naval Strategic Planning, 1888-1940 (Lund: Esselte Studium, 1973). The former addresses the more immediate military and political factors influencing German naval thought, and the latter looks at the more long-term maritime


16 *Ibid.*, p. 271; Derry, p. 16


18 *Ibid.*, p. 75

19 Herwig, “Introduction: Wolfgang Wegener and German Naval Strategy from Tirpitz to Raeder”, in Wegener, p. xlii


22 In fact, although Raeder gave no credit to the retired *Vizeadmiral* in his talk, a comparison of the speech and the text of *Seesstrategie des Weltkrieges* reveals that he blatantly “lifted” material from the latter’s work. Gemzell shows this “cribbing” of Wegener’s work by Raeder neatly by comparing excerpts from each side-by-side. Gemzell, *Raeder*, pp. 54-6

23 *Fuehrer Conferences*, 10 October 1939


25 Unsigned Memorandum from Hitler to Brauchitsch, Raeder, Göring, Keitel, 9 October 1939, in *Trial of Major War Criminals by the International Military Tribunal Sitting at*

26 "Gespräch mit dem Führer am 2,11,34 bei Ltmeldung des Kommandanten Emden", IMT 34/190-C, pp. 775-6

27 The exact date in 1936 for the composition of this important document is not known. However, it was given to Albert Speer personally by Hitler in 1944. For the complete text and Speer’s covering note explaining the circumstances by which it came into his possession see DGFP C/5/490, pp. 853-862; T. Wilhelm, "Hitler’s Denkschrift zum Vierjahresplan", Vierteljahreshefte für Zeitgeschichte, 3 (April 1955), pp. 184-210; R. Overy, War and Economy in the Third Reich (Oxford: Clarendon Press, 1994), pp. 233-256; Irving, Göring: A Biography (London: Macmillan, 1989), pp. 166-7

28 For a discussion of the importance of oil in Germany’s strategic planning see J. S. A. Hayward, “Hitler’s Quest for Oil: The Impact of Economic Considerations on Military Strategy, 1941-42”, Journal of Strategic Studies, 18/4 (December 1995), pp. 94-135

29 DGFP C/5/490, p. 862


31 M. Fritz, German Steel and Swedish Iron Ore 1939-1945 (Gothenburg: Publications of the Institute of Economic History of the Gothenburg University, 1974), pp. 30-1

32 Ibid., p. 31

33 United States Strategic Bombing Survey: The Effects of Strategic Bombing on the German War Economy (Overall Economic Effects Division, 1945), p. 99


35 For a contemporary asessment of the iron and steel situation under the Four Year Plan until 1940 see NA T71/135 Die Eisen- u. Stahlversorgung des Vierjahresplanes, Stand v.1.1.38. Zusammengestellt von Abt. III/H Amtes für Deutsche Roh- u. Werkstoffe jetzt: Abt. P Reichsstelle für Wirtschaftsausbau Sachbearbeiter: Dr. Dittebrand

36 Fritz, p. 33, fn. 9; in addition to this mine the other sources of importance were the so-called Doggererzreviere (Dogger ore mines) of southern Germany, and the Weserergebirge, see NA T77/214 Dr. F. Friedensburg, Regierungspräsident a.D., Die deutsche Roh- und Tieferstofflage, 3.10.1940

37 Fritz, p. 33
38 Ibid.

39 United States Bombing Survey, p. 247

40 NA T84/195 Die Eisenerzversorgung Großdeutschlands während der gegenwärtigen kriegerischen Verwicklungen, Bearbeitet im Institut für Weltwirtschaft, Dezember 1939

41 NA T77/214 Dr. F. Friedensburg, Regierungspräsident a.D., Die deutsche Roh- und Treibstofflage, 3.10.1940

42 Fritz, p. 34

43 NA T77/701 W Stb W Wi VI Nr. 340/39 gK II. Ang., 29.4.1939. Die Eisenerzversorgung Deutschlands im Kriege unter besonderer Berücksichtigung der schwedischen Einfuhr, abgestellt auf die Versorgungslage in den Jahren 1939 und 1940

44 How war could impact on German ore supplies was graphically demonstrated by the falling level of Spanish ore imports due to the outbreak of the Spanish Civil War, NA T84/134-5 OKW Wirtschaftsamt, Die Wirtschaftsstruktur Spaniens, März 1941

45 Declining mobilisation requirements were due to projected increases in domestic production. Additionally, the assessment also took into account that the iron content of central Swedish mines was about 5-10 per cent lower than those of northern Sweden.

46 NA T77/701 W Wi VI a, Anlage zu 4238/38 g.K., 22.12.1938: Übersicht über die Untersuchung der Erzversorgung Deutschlands im Krieg. Although the 29.4.39 document is fuller in content, both reports follow basically the same format and their assessments come to essentially the same conclusions.

47 NA T77/701 W Stb W Wi VI Nr. 340/39 gK II. Ang., 29.4.1939. Die Eisenerzversorgung Deutschlands im Kriege unter besonderer Berücksichtigung der schwedischen Einfuhr, abgestellt auf die Versorgungslage in den Jahren 1939 und 1940


49 Cf. NA T77/701 Anlagen 3. Gefährdung der nordschwedischen Erzgruben durch russische Luftstreitkräfte, in Die Eisenerzversorgung Deutschlands im Kriege unter besonderer Berücksichtigung der schwedischen Einfuhr, abgestellt auf die Versorgungslage in den Jahren 1939 und 1940

50 Domarus, Hitler: Reden und Proklamationen, Bd. 3, pp. 1251-2
51 Ibid., pp. 1371-73

52 DGFP D/8/162, pp. 167-8

53 Kriegstagebuch der Seekriegsleitung, 17, 30 October 1939


56 For a breakdown of ore imports by German ports see NA T71/14 Wirtschaftsgruppe Eisen schaffende Industrie nur für das Reichswirtschaftsministerium, “Der Bezug der deutschen Hochofen- und Stahlerwerks an Eisen und Manganerzen (ohne Schwefelkiesabbrände) unter Berücksichtigung der Verkehrsweg im Jahr 1938”


59 Dilks, pp. 31-2

60 Ibid., p. 34

61 Kriegstagebuch der Seekriegsleitung, 13 October 1939. For one of the most detailed reports, see the summary of the Chief of the Naval Intelligence Division, Kriegstagebuch der Seekriegsleitung, 4 December 1939

62 Ibid., 10 November 1939

63 Ibid., 15 November 1939

64 Ibid., 27 November 1939.

65 Fuehrer Conferences, 8 December 1939

The best discussion on the ideological component of the decision to invade Norway is still H.-D. Loock, *Quisling, Rosenberg und Terboven. Zur Vorgeschichte und Geschichte der nationalsozialistischen Revolution in Norwegen* (Stuttgart: Deutsche Verlags-Anstalt, 1970)


Rosenberg, “Kurzer Tätigkeitsbericht des Außenpolitischen Amtes”, p. 35


NA T454/79 *Programm der Reichstagung der Nordischen Gesellschaft vom 23. bis 30. Juni 1935 in Lübeck*. This document was found in a Kanzlie Rosenberg folder containing the activities of the *Nordische Gesellschaft*.


Loock, *Quisling, Rosenberg und Terboven*, p. 187


Loock, “Weserübung”, p. 49

Rosenberg, “Kurzer Tätigkeitsbericht des Außenpolitischen Amtes”, p. 35

Quisling, pp. 147-8

Ibid., pp. 275-6

Milward, *The Fascist Economy in Norway*, p. 5

Ibid., pp. 9-10

Rosenberg, “Anlagen I zum kurzen Tätigkeitsbericht des Aussenpolitischen Amtes der NSDAP von 1933-1943: Die politische Vorbereitung der militärischen Besetzung Norwegens in den Kriegsjahren 1939/1940”, *IMT 25/007-PS*, p. 40. That Quisling and Rosenberg were not in significant contact with each other until the last quarter of 1939 (despite Rosenberg’s later suggestions to the contrary) can be observed from the fact that neither the entries for the period 1934-1935 and June to December 1939 in Serephim, *Das politisches Tagebuch Alfred Rosenbergs*, nor the “Kurzer Tätigkeitsbericht des Aussenpolitischen Amtes” (*IMT 25/003-PS*, pp. 15-25) prepared by Rosenberg in October 1935 make any mention of either Quisling or *Nasjonal Samling*. This fact is also supported by the relatively extensive surviving records of *Aussenpolitisches Amt* and Rosenberg material for this period held at the National Archives, Washington; see Record Group T454 which contains records of the *Reichsministerium für die besetzten Ostgebiete.*

Kriegstagebuch der Seekriegsleitung, “Report of the Commander in Chief, Navy to the Fuehrer on 12 December 1939 at 1200”

The exact date of this first meeting is uncertain; Jodl’s diary indicates 13 December, while Raeder in a note on a letter from Rosenberg states 14 December, which in turn is in disagreement with Rosenberg’s *Aussenpolitisches Amt* report of June 1940 which gives 16 December 1939 as the date of this meeting. *The Jodl Diaries with Annotations by General der Artillerie Walter Warlimont, 1937-1945. Reel DJ 84* [hereafter *Jodl Tagebuch*] (Wakefield, England: Microform, 1973), 13 December 1939; Ziemke, *The German Northern Theater*, p. 9, fn. 20; A. Rosenberg, “Die politische Vorbereitung der Norwegen-Aktion”, *IMT 25/004-PS*, pp. 28-9


Jodl Tagebuch, 13 December 1939


Ibid., pp. 357, 732

Ibid., p. 735


Ibid., p. 156. This is almost identical wording to Rosenberg, *Mythus*, pp. 112-3
96 Weinberg, Zweites Buch, p. 157

97 Ibid. p. 125

98 Ibid., pp. 127, 132

99 Ibid., p. 124


101 DGFP D/7/525, pp. 502-3

102 The glaring omission of Finland from this clause was clearly deliberate, and in line with the conditions of the secret protocols of the German-Soviet pact of August

103 W. Hubatsch, Hitler's Weisungen für die Kriegführung 1939-1945: Dokumente des Oberkommandos der Wehrmacht (Koblenz: Bernard & Graefe, 1983), pp. 47-50
Chapter 2

1 Irving, Hitler’s War, p. 271

2 Domarus, Hitler: Reden und Proklamationen, Bd. 3, p. 1523

3 Rosenberg, “Die politische Vorbereitung der Norwegen-Aktion”, p. 29

4 Ibid.

5 Ibid., p. 30

6 Rosenberg, “Anlage I zum Tätigkeitsbericht des Aussenpolitischen, pp. 41-2

7 Fuehrer Conferences, 30 December 1939

8 The memorandum had been completed in late December 1939 but Hitler had it withheld for two weeks before releasing it. F. Halder, Halder, Kriegstagebuch: Tägliche Aufzeichungen des Chefs des Generalstabes des Heeres 1939-1945, Bd. I: Vom Polenfeldzug bis Ende der Westoffensive (14.8.1939-30.6.1940) [hereafter Halder, Kriegstagebuch] (Stuttgart: W. Kohlhäfer, 1962), 1 January 1940

9 Kriegstagebuch der Seekriegsleitung, I. Abteilung, 13 January 1940; NA T022/1818 Lagebetrachtung zur Studie “Nord”


13 Dilks, p. 35

14 Ibid.

15 Butler, Grand Strategy, Vol. II, pp. 103-4


17 Gemzell, Organization, p. 404

18 Cf. NA T1022/1818 Lagebetrachtung zur Studie “Nord”, p. 11

19 This examination of the German Navy’s Überlegungen Studie Nord is based on Ziemke’s discussion of the document, The German Northern Theater, pp. 12-3 and NA T1022/1818 Lagebetrachtung zur Studie “Nord”, pp. 1-23
20 NA T1022/1818 Lagebetrachtung zur Studie “Nord”, pp. 9-10

21 Jodl Tagebuch, 13, 18 December 1939

22 Ibid., 20 December 1939

23 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 13 December


25 Jodl, Tagebuch, 23 January 1940


28 Ziemke, The German Northern Theater, p. 12


31 Ibid.


33 USAFHSO K113.107-171 Nielsen, p. 114

34 D. Kahn, Hitler’s Spies: German Military Intelligence in World War II (New York: Macmillan, 1978), p. 119

35 USAFHSO K113.107-171 Nielsen, p. 115

Ziemke, *The German Northern Theater*, p. 15


*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 14 February 1940

*Ibid.*, 15 February 1940


*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 16 February 1940


For whether the crew were armed or not see G. Weinberg, *A World at Arms: A Global History of World War II* (Cambridge: Cambridge University Press, 1994), p. 953, fn. 77

Irving, *Hitler’s War*, p. 264

*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 17 February 1940

R. G. Reuth (ed.), *Joseph Goebbels Tagebücher, Bd. 4: 1940-1942* (Münch/Zürich: Piper, 1992), 19 February

*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 17 and 18 February 1940, NA T1022/1756 PG 32305 Skl, KTB, Teil D I d, Luftlagemeldungen, 18 February 1940

*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 16 February 1940


Ibid., p. 107


Quoted in Bédarida, p. 23, fn. 58

Gilbert, pp. 929-31


Dilks, p. 50

For naval concerns see *Kriegstagebuch der Seekriegsleitung, I. Abteilung*, 10 March 1940

Irving, *Hitler's War*, pp. 270-1; *Kriegstagebuch der Seekriegsleitung, I. Abteilung*, 30 March 1940


Halder, *Kriegstagebuch*, 21 February 1940

Ottmer, "Weserübung", p. 42; Hubatsch, "Weserübung", p. 39

Looock, "Weserübung", p. 83; USAFHRA K113.305 Norwegen Feldzug 1940. *Auszüge aus dem Kriegstagebuch der Gruppe XXI (278/1)* [hereafter Kriegstagebuch der Gruppe XXI], 21 February 1940 21 February 1940]. The original diary of Gruppe XXI was destroyed in a fire and these extracts are taken from the Germany Army archives.

Domarus, *Hitler: Reden und Proklamationen, Bd. 3*, p. 1463; Below, p. 221
USAFHRA K113.305 Kriegstagebuch der Gruppe XXI, 26 February 1940

Hubatsch, *Hitlers Weisungen*, pp. 47-50

For earlier considerations regarding the inclusion of Denmark see *Halder, Kriegstagebuch*, 10 January 1940

Hubatsch, *Hitlers Weisungen*, p. 47; The term *Gruppe* is used to define a unit that falls in size and composition between a corps and an army.

*Jodl, Tagebuch*, 3 March 1940; *Halder, Kriegstagebuch*, 3 March 1940

*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 13 March 1940

For doubts about the continued necessity of *Weserübung* in the light of the ending of the Winter War see *Jodl, Tagebuch*, 28 March 1940

*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 15 March 1940

*Fuehrer Conferences*, 26 March 1940

USAFHRA K113.305 Kriegstagebuch der Gruppe XXI, 2 April 1940; *Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 2 April 1940. For the influence of ice in the Baltic in slowing preparations in late February and early March see *Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 14 March 1940


*Jodl, Tagebuch*, 1 March 1940

*Ibid.*, 5 March 1940


Below, p. 225

Irving, *Goring*, pp. 284-5; For Hitler’s disapproval of delays caused by the armed services see *Jodl, Tagebuch*, 3 March 1940.

*Milch, Merkbuch*, 13 March 1940

*Ibid.*, editor’s interview
87 R. Knauss, Der Feldzug in Norwegen 1940 (unpublished after-action narrative and analysis from the collection of Professor J. Corum, SAAS, Air University, Alabama, n.d.), p. 27

88 For a brief description of how this was supposed to work on day one of the invasion see USAFHRA K113.305 Generalkommando, X.Fl.K., Ia. B.Nr. 10053/40 gKdos. Gefechtsstand, den 20.3.40. Anlage zu X.Fl.K., Ia Nr. 10053/40 gKdos. Auszug aus "Der Führer und Oberster Befehlshaber der Wehrmacht" WFA/Abt. I. Nr. 22094/40 gKdos Chefs.; Ziemke, The German Northern Theater, pp. 31-2

89 "Betr.: ‘Weserübung Nord’: Operationsbefehl für die Besetzung Norwegens Nr 1", in Hubatsch, "Weserübung", appendix H, pp. 441-5


91 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 9 March 1940

92 Assman, The German Campaign in Norway, pp. 10-11

93 Fuehrer Conferences, 9 March 1940

94 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 29 March, 2 April 1940

95 K. Doenitz, Memoirs: Ten Years and Twenty Days (Annapolis, MD: Naval Institute, 1990. First published in English 1959), pp. 76-7

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101 Knauss, p. 18

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137 NA T971/20 Anlage 3 zu Generalkommando des X.Fliegerk., Ia Br.B.Nr.10053/40 gKdos. Feindnachrichtenblatt Oslo und Oslofjord

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*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 30 March 1940; Gaul, “The Part Played by the German Air Force”, pp. 7-8


NA T1022/1756 *Oberkommando der Kriegsmarine. 1 Skl-Teil D: Luftlage, 1. Mar. bis 31. Juli 1940. Abschrift. Generalstab der Luftwaffe meldet am 3.4.40 7.45 Uhr. NB, although dated 3.4.40 the report concerned the previous days activities.*

*Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 3 April 1940

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175 For a brief discussion of some of the diplomatic warnings flowing into Norway see F. Kersaudy, Norway 1940 (London: Collins, 1990), pp. 60-1

176 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 3 April 1940

177 Kersaudy, pp. 61-2

178 Ibid.

179 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 8 April 1940

Chapter 3


3 V. Kühn, Deutsche Fallschrimjäger im Zweiten Weltkrieg (Stuttgart: Motorbuch, 1977), pp. 29-30

4 Bekker, Angriffhöhe 4000, p. 93


6 Shores, p. 227. Alongside primary documents, Shores’ Fledgling Eagles (Chapter 2, f.n. 148) and two others have proved invaluable in charting the events and details surrounding the activity of the Luftwaffe over Norway during Weserübung. Shores’ chronology is both detailed and from the present author’s familiarity with the primary material, must be considered accurate overall. The second solid narrative of the Norwegian campaign utilised here is E. R. Hooton’s, Phoenix Triumphant: The Rise and Rise of the Luftwaffe (London: Arms and Armour, 1994). Last, but certainly not least, is W. Gaul’s unpublished work, “The Part Played by the German Air Force and the Naval Air Force in the invasion of Norway”, which along with Shores has already been cited in the previous chapter (Chapter 2, f.n. 114). Originally drafted as Die Beteiligung der Luftwaffe und der Seehaftstreitkräfte an der Norwegenoperation, this excellent translated narrative is based on Gaul’s extensive first-hand knowledge of the campaign and access to surviving naval documents. Neither Gaul’s German work nor the English version have been widely used previously.

7 Shores, p. 227; J. Vasco and P. D. Cornwell, Zerstörer. The Messerschmitt 110 and its Units in 1940 (Norfolk: JAC Publications, 1995), p. 13; NA T971/6 Erfahrungen aus Einsatz der I./Z.G.76 in Norwegenfeldzug (n.d. for this specific document, but it appears with a number of separate reports under Bericht von April 1940 ueber Einsatz der Luftwaffe bei der Besetzung von Danemark und Norwegen am 9 April 1940)

8 USAFhra K113.305 Der Oberbefehlshaber der Luftwaffe, Fuehrrungsstab Ic Nr. 3343/40 gKdos (III). Einsatz der Fallschirm-und Lufttransportverbaende bei der Besetzung von Daenemark und Norwegen am 9.4.1940. H. Qu., den 10.4.1940

9 Shores, p. 227

10 Ibid.

11 USAFhra K113:305 Der “Norwegen-Feldzug” 1940, p. 9

12 Ziemke, The German Northern Theater, pp. 59-62

13 Ibid., p. 60
14 NA T971/16 Geschichte der I./K.G. General Wever 4 vom 1.9.1939 bis 15.7.1944 und Geschichte der III./K.G. General Wever 4 vom January 1941 bis Oktober 1943

15 Ibid.

16 Bekker, Angriffshöhe 4000, p. 94

17 Moulton, p. 93

18 DGFP D/9/65, p. 102

19 Moulton, pp. 96-7

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21 Ibid., pp. 94-6

22 Vasco, p. 13

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29 Hubatsch, “Weserübung”, p. 82

30 E. Loewenstern, Luftwaffe über dem Feind (Berlin: Wilhelm Limpert, 1941), p. 60

31 Bekker, Angriffshöhe 4000, p. 101


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34 Ibid., p. 229
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Ibid., 9 April 1940

Total figures vary between accounts and the present author has chosen to accept the totals in Gaul, “The Part Played by the German Air Force”, p. 15, and USAFHRA K113.305 Der Oberbefehlshaber der Luftwaffe, Fuehrungsstab Ic Nr. 3343/40 g.Kdos (III). Einsatz der Fallschrim-und Lufttransportverbände bei der Besetzung von Daenemark und Norwegen am 9.4.1940. H. Qu., den 10.4.1940

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F. O. Busch, “Narvik: The Story of the Heroic Battle of the German Destroyers”, in Essays by German Officers and Officials about World War II (Wilmington, DL: Scholarly Resources in co-operation with the US Naval Historical Center, nd), p. 123
55 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 10 April 1940

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61 Ibid.

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64 Ibid., p. 125

65 NA T1022/3349 Kriegstagebuch, General der Luftwaffe beim Oberbefehlshaber der Marine, 11.4.40; Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 10 April 1940; for a description of the G.d.Luft b. Ober d.M.'s liaison role see USAFHRA 519.681 B-4 Air Staff Post Hostilities Intelligence Requirements on German Air Force (Headquarters United States Air Forces in Europe, 7 September 1945), pp. 6-7

66 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 10 April 1940

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68 Befehlshaber der Unterseeboote, Kriegstagebuch, 12 April 1940; Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 10 April 1940


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74 Ibid.


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89 Shores, p. 244; Smith, p. 402

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94 Milch, Merkbuch, 11 April
95 Kessler, p. 10

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97 Irving, The Rise and Fall of the Luftwaffe, p. 86

98 Hooton, Phoenix Triumphant, p. 227

99 The only exception to this is, of course, Irving’s Milch biography. Yet even here, Irving only devotes three pages to Milch’s involvement in the Norwegian campaign, see The Rise and Fall of the Luftwaffe, pp. 85-8

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101 Middlebrook, p. 31


103 Ibid.; Hooton, Phoenix Triumphant, p. 227

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105 Ibid.


107 Shores, p. 255


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113 Gaul, “The Part Played by the German Air Force”, p. 21

114 Shores, p. 262

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139 G. Till, "The Battle of the Atlantic as History", in *The Battle of the Atlantic 1939-1945*, eds. S. Howarth and D. Law (Annapolis, Naval Institute, 1994), p. 589; Donitz, pp. 84-90


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7 Kahn, pp. 215-7; USAFHRRA K113.107-191 Colonel Kurt Gottschling, German Air Signal Corps (Retired), Radio Intercept Sevice of the German Air Force, p. 143

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99 Stegemann, "Die Sicherung der europäischen Nordflanke: III. Das Unternehmen "Weserübung"" in Das Deutsche Reich und der Zweite Weltkrieg, Bd. 2, p. 225

100 Weinberg, A World at Arms, p. 117


102 Ibid., p. 125; Moulton, p. 12


104 Riste, p. 127; Riste's thoughts were picked up and elaborated at length by Adams, pp. 171-4

105 Derry, pp. 142-3

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107 The best analysis of the entire leadership problem and upon which this discussion is based is to be found in Harvey, pp. 201-23 and 252-62

108 Ibid., pp. 201-23

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170 Kriegstagebuch der Seekriegsleitung, I. Abteilung, 7 June 1940

171 Ibid., 7, 8 June 1940

172 Gaul, “The Part Played by the German Air Force”, p. 52


174 Bekker, Hitler’s Naval War, pp. 46-7

175 Assman, The German Campaign in Norway, p. 72

176 For the controversy over Marschall’s decision to attack the convoys rather than enter the fjords see: Assman, The German Campaign in Norway, pp. 68-76; Stegemann, “Das Unternehmen “Weserübung””, pp. 222-4; J. Winton, Carrier Glorious: The Life and Death of an Aircraft Carrier (London: Leo Cooper, 1986), p. 162, Kriegstagebuch der Seekriegsleitung, I. Abteilung, 8 June 1940


178 Winton, p. 168; Miller, p. 75; For an eyewitness account onboard Glorious see K. Cross with G. V. Orange, Straight and Level (London: Grub Street, 1993), pp. 101-4

179 Miller, p. 75
180 Roskill, *The War at Sea, Vol 1*, p. 196

181 *Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 8 June 1940


183 Busch, p. 301

184 Stegemann, "Das Unternehmen ‘Weserübung’", p. 224

185 Domarus, *Hitler, Reden und Proklamationen, Bd. 3*, p. 1545


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2 *Fuehrer Conferences*, 11 July 1940

3 Milward, *The Fascist Economy in Norway*, p. 67

4 Ibid., pp. 38-9, 67-94

5 Picker, p. 66


11 USAFHR A 512.651D-4 Aircraft and Aero-Engine Factories in Norway, A.1.2(a) Report No.C.125/45 dated 20th February, 1945. This short but useful document details the location, the specific firm and its activities with regard to Norwegian factories involved in support of the German air war after occupation.

12 Joseph Goebbels Tagebücher, 21 April 1940; Serephim, p. 133

13 *Fuehrer Conferences*, 11 July 1940; Loock, *Quisling, Rosenberg und Terboven*, p. 457; Picker, p. 109; Joseph Goebbels Tagebücher, 9 July 1940


17 Weinberg, *A World at Arms*, p. 983, fn. 235


19 *Befehlshaber der Unterseeboote, Kriegstagebuch*, 1 July 1940; further figures on the small amounts of U-boats available in the wake of *Weserübung* and *Fall Gelb* can be found in Stegemann, “Die zweite Phase der Seekriegführung bis zum Frühjahr 1941: I. Der U-boat-Krieg” in *Das Deutsche Reich und der Zweite Weltkrieg, Bd. 2*, p. 345


21 For the use of the French bases see, J. Kessler, “U-boat Bases in the Bay of Biscay”, in *The Battle of the Atlantic*, pp. 252-65; Stegemann, “Der U-boat-Krieg”, p. 345

22 *Deutsche Allgemeine Zeitung*, 15 April 1940, quoted in Busch, p. 229


24 *Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 12 June 1940

25 Bittner, pp. 51-2

26 *Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 18 June 1940

27 *Ibid.*, 20 June 1940

28 *Fuehrer Conferences*, 20 June 1940


30 *Ibid.*, 20 June 1940
31 Bittner, p. 53


34 Ibid.

35 Doentiz, p. 144


37 Deutsche Luftwacht, Jahr 7, Nr 9, Berlin, 1 Mai 1940, p. 161


40 Hubatsch, Hitlers Weisungen, pp. 47


42 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 2 October 1940

43 USAFHR A 519.601B-4 Air Staff Post Hostilities Intelligence Requirements on the German Air Force. Appendix V: “Attitude Towards an Independent Naval Air Force—Admiral Schniewind C of S German Navy”. AAF Sta. 379, APO 633, U.S. Army, 7 September 1945

44 H. Boog, “Luftwaffe Support of the German Navy”, in The Battle of the Atlantic, p. 303

45 Ibid., p. 302

46 Ibid.

Adopted from Gaul, “The Development of the Naval Air Force”, p. 1

Boog, “Luftwaffe Support of the German Navy”, p. 303


*Ibid.*, pp. 5-6


Organised into four distinct groups, the 25 squadrons were to be composed of three mixed coastal wings (each with a single close-reconnaissance squadron, a long-range reconnaissance squadron, and a multi-purpose squadron with bombs, mines and torpedoes), two ship-borne wings (each made up of two seaplane squadrons); three mixed aircraft carrier wings (each comprising a fighter, multi-purpose and Stuka squadron); and three seaplane coastal squadrons. Adopted from Gaul, “The Development of the Naval Air Force”, p. 2

The 62-squadron programme totalling some 800 planes in 29 multi-purpose, nine flying boat, three long-range reconnaissance, six long-range bomber, seven ship-borne and 12 carrier-borne squadrons), see G. Bildlingmaier, “Der Grundlagen für die Zusammenarbeit Luftwaffe/Kriegsmarine und ihre Erprobung in den ersten Kriegsmonaten” in *Die Entwicklung des Flottenkommandos, Beiträge zur Wehrforschung, Bd. IV*, ed. Arbeitskreis für Wehrforschung (Darmstadt: Wehr und Wissen, 1964), pp. 78-9; Gaul, “The Development of the Naval Air Force”, p. 4


Gaul, “The Development of the Naval Air Force”, p. 6

Boog, “Luftwaffe Support of the German Navy”, p. 305


61 AWM54 432/4/103 *The Douhet Theory and its Application to the Present War (1944)* (Translated by the Air Ministry A.H.B.6., November 1946. Translation VII/11), pp 3-7


64 Homze, “The Luftwaffe’s Failure to Develop a Heavy Bomber Before World War II”, *Aerospace Historian*, (March 1977), pp. 20-1

65 Ibid.

66 Ibid., p. 21


68 Ibid.

69 Homze, *Arming the Luftwaffe*, p. 60

70 Ibid., p. 122

71 Ibid.

72 Ibid.

73 Ibid.

74 Ibid.

75 Smith, p. 412

76 Green, pp. 504-10. Of course the Germans developed longer-range aircraft as the war progressed such as the four-engine Junkers Ju 290 and six-engine 390 which were successors to the Ju 90; the Messerschmitt Me 264, dubbed the *Amerika-Bomber*, and very long-range versions of the Condor. Nevertheless, all these aircraft either entered the war too late or in too few numbers to significantly play a part in the war at sea.

A good portion of this argument owes itself to W. Murray’s analysis of the Germans situation in the pre-war period in “Luftwaffe Against Poland”, in *Case Studies in the Achievement of Air Superiority*, pp. 70-1


For a discussion on the effect of the Reich’s resource shortage and its importance to German military planning see, B. H. Klein, *Germany’s Economic Preparations for War* (Cambridge, Mass.: Harvard University Press, 1959), pp. 76-82


Irving, *The Rise and Fall of the Luftwaffe*, p. 54

Homze, “The Luftwaffe’s Failure to Develop a Heavy Bomber”, p. 25


Homze, *Arming the Luftwaffe*, p. 127

Overy, “From ‘Uralbomber’ to ‘Amerikabomber’”, p. 157

Murray, “The Luftwaffe Before the Second World War”, p. 262

Baumbach, p. 212; Green, pp. 343-4

Irving, *The Rise and Fall of the Luftwaffe*, pp. 64-5; that German planners were thinking about the problems associated with air attacks can be seen in NA T971/3/6 Chef 1. Abt., *Luftkriegführung gegen England*, 22.11.39. Interestingly, it would appear that the map at the end of the document showing “attack targets for the Luftwaffe in England” has been incorrectly inserted here by the cataloguer (who scribbled at the top of the map that it should be added to this file), since it contains flight details not only from the German coast but also from France and Norway, a highly unlikely scenario in late 1939 when Norway was still excluded from Hitler’s plans, let alone Luftwaffe considerations. Moreover, the document makes no reference to flights from Norway or France in the text.

Homze, *Arming the Luftwaffe*, p. 167

*Ibid.*; interestingly, the concept of requiring a large bomber to be able to dive was not uniquely German, as RAF planners were also toying with the idea, E. R. Hooton, “Axis aircraft at the Outbreak of War” in *Aircraft of the Second World War* series ed. P. Jarrett (London: Putnam, 1997), p. 16

94 Homze, *Arming the Luftwaffe*, p. 167

95 Smith, p. 281


97 AWM 54 423/4/103 *Address by the Reichmarschall Goering to the Representatives of the German Aircraft Industry, 13th September 1942 (Translated by Air Minstry, A.H.B.6, 8 October 1948. Translation VII/78)*, pp. 6-7

98 Baumbach, p. 212

99 Green, pp. 343-4


101 The 27 January Protocol is reproduced in Bildlingmaier, pp. 109-10

102 These units numbered 9 long-range reconnaissance, 12 multi-purpose, 12 carrier-borne and two ship-borne squadrons, Gaul, “The Development of the Naval Air Force”, p. 6

103 Hümmelchen, p. 19; Boog, “Luftwaffe Support of the German Navy”, p. 306

104 NA RG 457/743 *German Naval Air 1933 to 1945*, p. 11

105 Maier, “Totaler Krieg und operativer Luftkrieg”, p. 65

106 *Ibid.*., p. 55

107 Even these obsolete forces the Navy would consistently battle to retain, see P. E. Schramm (gen. ed.), *Kriestagebuch des Oberkommandos der Wehrmacht 1940-1941 (Wehrmachtführungsstab), Band 1 [hereafter Kriestagebuch des Oberkommandos der Wehrmacht]* (Frankfurt an Main: Bernard & Graefe Verlag für Wehrwesen, 1961), 10 September 1940


109 Bildlingmaier, pp. 110-1

110 Gaul, “German Air Force Successes”, p. 10

111 *Kriegstagebuch der Seekriegsleitung, 1. Abteilung*, 9 October 1940; Hümmelchen, p. 61


Bildlingmaier, pp. 95-7; NA T1022/1756 Oberkommando der Kriegsmarine, I Skl-Teil D Luftlage. Meldung Genst. Luftwaffe, 22.10.39. 0800 Uhr

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Ibid., 22 February 1940

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Kriegstagebuch der Seekriegsleitung, I. Abteilung, 23, 24, 26 February 1940

Gaul, "German Air Force Successes", p. 21

Kriegstagebuch der Seekriegsleitung, I. Abteilung, 26 February 1940

Gaul, "German Air Force Successes", p. 21

Boog, "Luftwaffe Support of the German Navy", p. 307

For the battle over the control of mines and torpedoes see Kriegstagebuch des Oberkommandos der Wehrmacht, 1 October 1940; Kriegstagebuch der Seekriegsleitung, I. Abteilung, 23, 26 February 1940; Fuehrer Conferences, 3 December 1940, Annex 2

AWM54 423/4/103 Operation "Sea-Lion" (Translations of 12 Top-Secret directives for the invasion of Britain, signed by Hitler, Keitel and Jodl in July, August, September and October, 1940. Translated by Air Ministry, A.H.B.6, February 1947. Translation VII/21)

Ibid.

A. F. Wilt, War From the Top: German and British Military Decision Making During World War II (Bloomington and Indianapolis: Indiana University Press, 1990), p. 146

Ibid.
130 Hubatsch, *Hitlers Weisungen*, pp. 61-5

131 AWM54 423/4/103 *Operation “Sea Lion”*

132 Wilt, p. 148

133 Ibid.

134 Ibid.


137 These were Stab/AufklGr 22, 2(F)AufklGrObdI, 1(F)/120 and 1(F)/121

138 *Luftflotten* 2 and 3: 875 He 111s, Ju 88s and Do 17s, 406 Ju 87s, 282 Bf 110s and 813 Bf 109s; Cooper, p. 133

139 Wilt, pp. 148-9

140 An excellent chronicle compiled from the Kriegstagebücher of Luftflotten 2, 3 and 5 of the Luftflotte’s air war against Britain and used here is NA T321/54 Luftkrieg gegen England, Gefechtskalender ab 1.8.40-31.3.41


142 Bekker, *Angriffshöhe 4000*, p. 156; The distances in Bekker’s original German publication are well short of the actual distances involved, but in the English edition these were corrected reasonably accurately, *The Luftwaffe Diaries* (New York: Doubleday, 1968), pp. 156, 157


144 Bekker, *Angriffshöhe 4000*, p. 157


150 Bekker, *Angriffshöhe 4000*, p. 158; Townsend, p. 318

151 Bekker, *Angriffshöhe 4000*, p. 158

152 Norman, pp. 66-7


155 Wood, p. 204


157 *Luftflotte 5* was ordered to take part in some night raids over northern England and Scotland, but these never equalled the air fleet’s effort of 15 August. See NA T971/60 Besprechung am 19.8.1940 in Karinhall. Aufgaben der Luftflotten für die nächsten Tage, in which orders are given for a night raid on Glasgow and NA T321/54 Luftkrieg gegen England, Gefechtskalender ab 1.8.40-31.3.41 for details of *Luftflotte 5*’s continued meagre contribution to future attacks on Glasgow.

158 Hough, p. 174

159 *Kriegstagebuch des Oberkommandos der Wehrmacht*, 5 September 1940

160 Irving, *The Rise and Fall of the Luftwaffe*, p. 106; Wilt, p. 73

161 AWM54 423/4/103 Operation "Sea-Lion"
162 Ibid., it does appear though that he had already decided not to go through with the invasion at a much earlier date; for a discussion of this and a detailed account for the reasons behind it, see NA T971/3/18 Maj. Rauch, Bericht über das im Jahr 1940 geplant gewesene Englandunternehmen (dechnname Seelōwe), Strub den. 30 Juli 1945. This report on operation Seelōwe was written by Major Rauch in July 1945 while in an OKL POW camp in Berchtesgarden. His insight into the planned invasion of Britain is based on his position as Liaison Officer to Headquarters Army Group “A” Generalfeldmarschall von Rundstedt in Germaine-en-Laye near Paris in the second half of 1940.


164 Ibid.


166 AWM54 423/4/103 The Course of the Air War Against England (Two studies prepared by the German Historical Branch, 22 November 1939 and 7 July 1944. Translated by Air Ministry, A.H.B.6, May 1947. Translation VII/26)

167 Domarus, Hitler, Reden und Proklamationen, Bd. 3, p. 1580

168 Higham, p. 138


172 Suchenwirth, p. 43. Suchenwirth based this assessment on post-war discussions with senior German officers; J. Ray, The Battle of Britain: New Perspectives (London: Arms and Armour, 1994), p. 36

173 Suchenwirth, p. 67

174 Ibid., p. 43
Wilt, pp. 149-50

Smith, pp. 260, 418

R. J. Overy, The Air War 1939-1945 (London: Europa, 1980), p. 113

Ibid.

Smith, p. 282

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Higham, p. 119

Ibid., p. 130

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Irving, The Rise and Fall of the Luftwaffe, p. 94

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Doenitz, p. 134

Befehlshaber der Unterseeboote, Kriegstagebuch, 14 December 1940; Doenitz, p. 135

Smith, p. 202; AWM54 423/4/103 The Operational Use of the Luftwaffe in the War at Sea, 1939-43 (A study prepared by the German Air Historical Branch, 8th Abteilung, January, 1944. Translated by the Air Ministry, A.H.B.6, October 1950. Translation VII/102), p. 4
The liner was subsequently sunk by a U-boat, *ibid.*


*Fuehrer Conferences*, 27 December 1940, Annex 2 “Urgent Demands of the Navy on the Air Force” and 3 December 1940, Annex 3 “Reflections Concerning the Conduct of the War against Britain (Air Reconnaissance for Naval Warfare)”

Miller, pp. 171-2

*Befehlshaber der Unterseeboote, Kriegstagebuch*, 7 January 1941


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*Ibid.*, 19 February 1941

Hubatsch, *Hitlers Weisungen*, pp. 100-3

Boog, “Luftwaffe Support of the German Navy”, p. 311

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Hessler, *The U-boat War in the Atlantic, Vol. 1*, p. 68

*Befehlshaber der Unterseeboote, Kriegstagebuch*, 19 February 1941


*Ibid.*, 21 February 1941

Hessler, *The U-boat War in the Atlantic, Vol. 1*, p. 68

*Befehlshaber der Unterseeboote, Kriegstagebuch*, 19 February 1941

*Ibid.*, 26 February 1941

*Ibid.*, 2 March 1941


At a stretch the Condor could reach up to 4,410 kilometres; Smith, pp. 207, 289; Green, pp. 232, 344
Doenitz, p. 139

Hessler, *The U-boat War in the Atlantic, Vol. 1*, p. 69

Doenitz, p. 139

Terraine, *Business in Great Waters*, p. 261


For a contemporary assessment of the slow deployment of the FW-200 Condor, see USAFHRA 512. 6314A April 1943, *Notes on the German Air Force (Air Ministry, Air Publication, April 1943. Second edition)*, pp. 10-11

M. Milner, “The Battle of the Atlantic”, *Journal of Strategic Studies*, 13, 1 (March, 1990), pp. 47, 49

Galland, p. 18


This possibility was foreseen as early as a November 1939 in a secret report, AWM54 *Proposal for the Conduct of Air Warfare Against Britain (This report was presented by General Schmid of the German Air Force Operations Staff, Intelligence, 22 November 1939. Translated by Air Ministry, A.H.B.6, June 1947. Translation VII/30)*


G. Till, “The Battle of the Atlantic as History”, in *The Battle of the Atlantic*, p. 589;


Doenitz, p. 269


Weichold, “A Survey from the Naval Point of View”, pp. 14-15
238 Green, p. 360

239 Ibid.

240 R. Probert, “Allied Land-Based Anti-Submarine Warfare”, in The Battle of the Atlantic, p. 379

241 Ibid., p. 373

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243 Milner, p. 48; Till, p. 586

244 Ibid., p. 587


248 Overy, “From ‘Uralbomber’ to ‘Amerikabomber’”, p. 173
Chapter 6

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2 Hubatsch, Hitler's Weisungen, pp. 84-8

3 USAFhra K113.309/3 Verteilung der Fliegerverbände auf verschiedenen Kämpffronten. Stand 20.6.1941; H. Plocher, The German Air Force Versus Russia, 1941 USAF Historical Studies No. 153 (USAF Historical Division, Research Institute, Air University, 1965), pp. 219-20

4 USAFhra K113.309/3 Gliederung der Luftflotte 5. Stand: bei Beginn des Ostfeldzuges

5 Plocher, The German Air Force Versus Russia, 1941, p. 32

6 Ibid., pp. 34, 190; cf. Halder Kriegstagebuch, 12 September 1941


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10 For Army strength and organisation on 22 June 1941 see ibid., pp. 137-8


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13 Ibid.

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15 Kriegstagebuch des Oberkommandos der Wehrmacht, 8 and 15 March 1941; USAFhra K113.305 Oberkommando der Wehrmacht, Nr. 00469 gKdos. WFSt./Abtl.I (I Op.). Bezug: Chef OKW/WFSt./Abtl. L(V) Nr. 0321/40 g.v.25.7.40. Kampfanweisungen fuer die Verteidigung Norwegens, F.H.Qu., den 26, 3,41

16 Ziemke, The German Northern Theater, p. 215; NA T1022/3995 Kriegstagebuch des Admiral Nordmeer, 26 December 1941
Kriegstagebuch des Oberkommandos der Wehrmacht, 28 December 1941; Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 27 December 1941; NA T1022/3995 Kriegstagebuch des Admiral Nordmeer, 27 December 1941; Ziemke, The German Northern Theater, pp. 215-6

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Sweden was implicated in these mechanisations and consequently German planners began examining the need to invade Norway's eastern neighbour in 1942, see W. Hubatsch, "Operation Polarfuchs: ein strategischer Schubladenentwurf", Wehr-Wissenschaftliche Rundschau, 1 (January 1956), pp. 11-9

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44 NA T1022/3996 Kriegstagebuch des Admiral Nordmeer, 5 March 1942; Kriegstagebuch
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13 USAFHR A K113 305 Norwegian—10. Juli 1943; the figures given here should be used cautiously since they were compiled after the war for the Karlsruhe Collection of Luftwaffe documents from enemy prepared strength charts. More accurate figures can be found in a Von Rohden Collection file: NA T971/47/38 Verlust, Verbrauch und Bestandszahlen und Monatsmeldungen, August 1943—November 1944. Overall, this more accurate material prepared by the Luftwaffe’s own 6. Abteilung has higher figures for all types of aircraft (but particularly fighters) deployed in Norway. Nevertheless, the rise and fall in operational strengths over time between the two sources is relatively consistent and supports the overall points being made in the text. Since, therefore, the information contained in this latter set of documents does not cover the complete period in discussion, I have chosen to rely on the former for consistency’s sake; for the structure
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93 Hinsley, British Intelligence, Vol. 3, Pt. 2, p. 494; Boog, “‘Josephine’”, p. 150

94 A General der Luftwaffe in Finland was also established but was of course abandoned when the Finns withdrew from the Axis cause in August 1944.

95 Hinsley, British Intelligence, Vol. 3, Pt. 2, p. 495

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119 Kriegstagebuch der Seekriegsleitung, 1. Abteilung, 7 February 1945

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