

German Plans for the Invasion of England, 1940
Operation "SEALION"

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Note: This Chapter epitomizes
the story, and should
suffice for the reader
requiring only the broad
outline.

It has references to the
more detailed paragraphs
of the earlier Chapters.

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 - b) A10 - June 1940
 - c) A11 - July 1940
 - d) A12 - August 1940
 - e) A13 - September 1940
- 2) The War Diary of the Naval Staff Part (c) VII 1940
The verbal reports by C. in C. of the Navy to Hitler.
- 3) "Sealion" files of the Naval Staff. (Naval War Diary,
Part B V).
- 4) Naval Staff files for "Sealion" I,5 Information about
the Enemy.
- 5) " " " " " I,11 Operational intentions
of the Naval Groups of
Admiral Commanding Submarines
and of the Naval Commander
in the West.
- 6) " " " " " I,12 Progress of Preparations
- 7) " " " " " I,13 Memorandum by C. in C.
of Army. Attitude
of Naval Staff etc.
- 8) Files I,1 Directives by the Supreme Command of the
Armed Forces.
- 9) Personal notations by the author from various
reliable sources.

(v)

TITLES USED IN THIS REPORT
AND ENGLISH EQUIVALENTS

FHQ	Führerhauptquartier	= Hitler's Headquarters
OKW	Oberkommando der Wehrmacht	= Supreme Command of the Armed Forces
OKM	Oberkommando der Kriegsmarine	= Naval High Command
Ob.d.M.	Oberbefehlshaber der Kriegsmarine (Grand Admiral Raeder)	= C. in C. of the Navy
Sk1	Seekriegsleitung	= Naval War Staff
1/Sk1	Erste = Operations-Abteilung der Seekriegsleitung (Head: Rear Admiral Fricke)	= Operations Division of the Naval War Staff
Ob.d.H.	Oberbefehlshaber des Heeres. (Field Marshal von Brauchitsch)	= C. in C. of the Army
OKH	Oberkommando des Heeres	= Army High Command
Ob.d.L.	Oberbefehlshaber der Luftwaffe (Reichsmarschall Göring)	= C. in C. of the Luftwaffe
Chef/OKW	Chef des Oberkommandos der Wehrmacht (Field Marshal Keitel)	= Chief of the Supreme Command of the Armed Forces.
C/Sk1	Chef des Stabes der Seekriegsleitung (Admiral Schniewind)	= Chief of Staff of Naval War Staff
KTB	Kriegstagebuch	= War Diary
S-Tag	Erster Operationstag für den "Seelöwen"	= D-Day for Operation "Sealion"
B.d.U.	Befehlshaber der U-Boote (Admiral Dönitz)	= Flag Officer Commanding U-Boats.
B.s.W.	Seebefehlshaber West (Flottenchef) (Vice Admiral Lütjens)	= Naval Commander West (C. in C. Fleet)

Note: Names are those of office-holders in 1940.

CHAPTER I
THE ORIGIN OF THE PLAN

1) The initiation of a plan for a landing in England came from the C. in C. of the Navy. As soon as he knew in the Autumn of 1939 of the Führer's intention to launch an offensive in the West, he ordered the Naval Staff to investigate the possibilities of an invasion of England. He started with the supposition that in the event of a successful outcome of the offensive, the Belgian and French Channel coast would become occupied by the Germans, and the Navy would possibly be confronted at short notice with the task of landing the German Army on the English South Coast. Within the Naval Staff a special staff was formed to concentrate on working out details of military, naval and technical shipping problems. This preparatory planning occupied the German Naval Staff, and nobody else had knowledge of it except the personnel specially detailed for the purpose. No German organisation had concerned itself previously with any deliberations or preparatory thoughts on the possibility of an invasion of England.

In the preliminary considerations by the Naval Staff it was established that a major landing of troops in England involved numerous military and naval conditions, of which the most important was the complete destruction of the enemy's air power as well as the annihilation or removal of any enemy forces which could threaten the area

of approach of the landing forces.

2) As a result of these preliminary reflections of the Naval Staff the C. in C. of the Navy first spoke to the Führer on 25th May, 1940, on the possibility of an invasion of England.

The Führer at first, however, took no further action on this proposal as he "fully appreciated the exceptional difficulties of such an undertaking".

(Note: Words and sentences in inverted commas are textual extracts from war diaries and other documents).

Hence no preparatory work resulted, at this stage, in the Supreme Command of the Armed Forces.

On the 20th June the C. in C. of the Navy again reported to the Führer on this question, and he emphasised that absolute air superiority was an essential prerequisite for carrying out the operation.

It is important to affirm that Grand Admiral Raeder did not make these two reports to Hitler with the intention of proposing the invasion or propagating the idea. His wish was mainly to discuss the whole question in good time, so as to avoid the consequences which might result from a hasty decision by Hitler, which might lead to the Navy being confronted by an insoluble problem as regards material preparations.

On the 20th June no discussion had yet taken place in the Führer's Headquarters as to whether the invasion should be prepared. Neither had the General Staff of the

Army occupied itself at this time with the question of a landing in England, as it "considered the carrying out impossible" and was therefore adverse to the operation.

3) However, in the last days of June - after the termination of the campaign in France, and rather late in the season - the suggestion of the C. in C. of the Navy was taken up by the Supreme Command, who, on the 2nd July, issued the first directive for the operation. It contained the following:- the Führer has decided that under certain conditions - most important of which is the achievement of air superiority - a landing in England may take place. The date is still undecided. Preparations are to be commenced as soon as possible. At present, it is a question of theoretical preparations for the possible event.

4) The Supreme Command required data for planning as follows:-

Army:

- a) Estimate of strength of the British Army for the next few months.
- b) Appreciation of the operational use of artillery from the mainland as additional protection for assembly of shipping space and of transports (in co-operation with the Navy).

Navy:

- a) Appreciation of the possibility of landing strong forces (25 to 40 divisions) and A.A. Units.
- b) Appreciation as to the most suitable sea area, and the resources that would be required to transport troops and supplies, and the escort forces needed.

The landing was to take place on a broad front in order to facilitate the penetration by the Army.

- c) Nature and extent of the available shipping space, and time required for getting it ready.

Luftwaffe:

- a) Appreciation as to whether and when decisive air superiority can be achieved.
- b) Possibility of supporting the crossing by means of air-borne landings.

On the 9th July the Naval Staff requested the Army and the Luftwaffe to state their operational intentions, which would form a basis for Naval preparations.

The Naval Staff emphasised that "the undertaking must be regarded essentially as one of transportation". The Naval Staff considered the area "in the English Channel between 1°30' East and 1°30' West as the most suitable for the crossing."

5) For the artillery cover of the operation from the Continent the Supreme Command required the establishment of powerful batteries in the area Calais-Cape Griz'Nez - Boulogne, to provide protective fire for the transports and for the flanks of the landing front. This demand caused the Head of the Naval Ordnance Department to warn that it would not be possible materially to support the landing with the few heavy guns that would be available for such long range requirements. But the Führer ordered the rapid construction of gun emplacements on the Channel Coast; covering fire was to be used especially on the flanks.

6) On the 11th July, the C. in C. of the Navy expressed his view to the Fuhrer that he regarded the landing only as an ultimate resort in order to make England ready to sue for peace. He was convinced that even without a landing England could be subdued by barring her sea supplies, by U-boat attacks and air attacks on her convoys, and by an intensive air war against her centres of industry. He enumerated the great difficulties and risks involved in the preparation and execution of the landing operation, and "cannot himself advocate the landing". The Fuhrer also regarded the operation only as a "last resort," before which air supremacy must first be attained.

7) On the 15th July, the Supreme Command of the Armed Forces informed the Naval Staff that the Fuhrer would require the operation to be so prepared that it could be launched any time from the 15th August.

Thus the situation which the C. in C. of the Navy in his conversations with Hitler in May and June had striven to avoid had become a reality; namely that the operation might be ordered at such short notice that it would be impossible in the time available to carry out the necessary material preparations for the gigantic task.

8) Should the question be raised why the German Armed Forces did not attempt the invasion in the early summer of 1940, immediately after the capture of Dunkirk, when the South Coast of England was still open and unprotected against German attack, the answer lies in the circumstances

of the Naval situation at that time. It is not possible merely to "swim over" to England. The whole of the shipping space, steamers, barges, tugs, trawlers and motor boats necessary for the crossing, including even small fishing boats, which had to supplement the inadequate number of motor vessels, had to be requisitioned immediately at German ports and on inland water ways; they had to be equipped for their special task, and then moved to the Franco-Belgian coast and assembled at the embarkation ports. These ports, whose facilities had been partly damaged, had to be prepared for the loading; the sea areas to be used for the crossing had to be swept for mines and minefields had to be laid for protection of the area of the crossing. Finally, the whole vast machinery, including the covering forces, had to be trained and co-ordinated to the smallest detail.

9) At this stage the Naval Staff commented as follows on the Fuhrer's requirements: The extent of the preparations, the already apparent difficulties, and the exceptional repercussion on German industry and on the whole traffic system were so extensive in their effect, that the Naval Staff must avoid all precipitate action, and must equally remain free to form its own decision, its own opinion as to the eventual feasibility of the operation. The exceptional nature of the operation required the concentration of all the resources of the Navy on this task. And yet, in the view of the C. in C.

of the Navy the course of the war so far had shown that "operations and landings which had previously seemed impossible were now feasible, thanks to the superior leadership and to the exceptional moral and offensive power of the Armed Forces".

10) The Directive by the Supreme Command dated 16th July, which followed the telephone information of the 15th, contained the decision of the Führer to prepare and eventually carry out the landing in England in the form of a surprise crossing on a broad front "approximately from Ramsgate to a point west of the Isle of Wight". The Directive required the preparations to be completed by the middle of August.

The Directive specified the following essential conditions as necessary before starting the operation: defeat of the English Air Force, creating mine-free routes, strong protection of the flanks of the crossing area by means of minefields, domination of the Coastal Area by means of coastal artillery, pinning down of the British Naval Forces and preliminary weakening of these.

11) The undertaking was given the code name "SEALION".

The naval Staff regarded the stipulation that the crossing should take place on a broad front between Ramsgate and the Isle of Wight as an alteration to the previous plan, involving serious consequences. The question "broad or narrow front" was later to lead to

fundamental differences of opinion and tiresome discussions between the Naval Staff and the High Command of the Army, and would eventually have to be solved by means of a compromise ordered by the Fuhrer. Because of their great significance these differences will be referred to later (See Chapter II D).

12) In a discussion between the Commanders-in-Chief of the Navy and Army on the 17th July, the latter expressed the intention to land with three Groups; one Group in the Ramsgate-Dover area, one between Dover - and Isle of Wight, and one west of the Isle of Wight. The C. in C. of the Navy unequivocally refused to guarantee safety against mines for the transports. The Army High Command believed that from the military tactical point of view the landing operation could not be carried out later than the middle of September, as the periods of fog to be expected after the beginning of October were regarded as a serious hindrance to the success of the enterprise. The Army High Command estimated the duration of the operation as one month.

The impression existed among the Naval Staff that the Army High Command, which had only recently strongly discouraged the idea of such an undertaking, had completely dropped its objections, and on the contrary, ignorant of the great difficulties, now regarded the enterprise as comparatively easy. Hence the C. in C. of the Navy informed the C. in C. of the Army that the operation was so dangerous as to involve the possibility of the loss of the whole of the Operational Armies, just as in the

Norwegian campaign the fate of the whole German
Fleet was at stake.

CHAPTER II

THE OPERATIONAL PREPARATIONS

13) A. The Naval Staff's Appreciation on the 19th July

On the basis of the Führer's Directive of the 16th July, the Naval Staff on the 19th appreciated the situation as follows:

"The task allotted to the Navy in operation 'SEALION' is out of all proportion to the Navy's strength and bears no relation to the tasks that are set to the Army and the Air Force. The task of the Army, apart from drawing up the operational plan for use after a successful landing and preparing the tactical execution on enemy territory, is limited to the assembly and appropriate disposition of the necessary forces in the Northern French and Belgian area; the Air Force scarcely needs to alter the plan of attack already in force or the dispositions for the fight against England; whereas the Navy must embark on an entirely new disposition of forces and a new plan of operational measures."

"The principal difficulties confronting the Navy are as follows:-

- 14) a) The transportation of Army troops must take place from a coast whose harbour installations and adjacent inland water-ways have been extensively damaged through the fighting in the campaign against France, or are of limited capacity.

- 15) b) The transport routes lie in a sea area in which weather, fog, current, tides and the state of the sea may present the greatest difficulties, not only at the first crossing but also on reaching the enemy coast and during the continued transport of further supplies.
- 16) c) Owing to the strong defences of the enemy harbours the landing cannot take place there, but the first wave, at least, must land on the open coast. It may be possible for the first wave to occupy individual harbours and make them usable for further arrivals of transports, but it must be appreciated that, in the case of harbours with piers, the enemy will block them with sunken ships, and that he will make the locks useless by destroying them. The necessity to land the first wave on an open coast imposes severe limitations in tonnage and draught of the selected ships. The craft must be able to navigate in shallow water so that, by means of specially constructed landing ramps, they may be able to put the troops and vehicles ashore. The great navigational difficulties (rise and fall, current, sea, and swell) are obvious. Alterations to shipping for these special tasks involve extensive and protracted work in the Yards.

- 17) (d) At present there is no information whatsoever as to the position of mines in the eastern portion of the Channel, through which the transports will have to pass. An adequate safety margin as regards mines will not be obtainable, in spite of the use of all resources. It must be appreciated that the enemy is in a position, at least near his own coast, to lay protective minefields at short notice and at the last moment.
- 18) e) The gaining of air supremacy is vital to the possibility of assembling the requisite Naval Forces and shipping in the relatively restricted area of embarkation. Moreover, the establishment of absolute air superiority is a prerequisite for the employment of mine-sweeping forces in the area to be crossed, and for carrying out sweeping operations. In view of the type of transports to be employed more especially in the Dover Straits and the immediate vicinity, (principally barges and river craft) it is not sufficient to clear specific narrow channels but the aim must be to create broad transport areas, since this is the only way to secure some degree of safety for the shipping.
- 19) f) So far the enemy has not needed to use his Fleet fully, as a matter of life and death, but the landing operations on the English Coast will find him resolved to throw in fully and decisively all his Naval forces. It cannot be assumed that the Luftwaffe alone will succeed in keeping the

enemy Naval forces clear of our shipping, as its operations are very dependent on weather conditions. The task of the German Navy must therefore be to strengthen the effect of Luftwaffe operations by the following measures:- minefields, use of light naval forces on the flanks of the transport area, operations by all available U-boats, and naval operations for creating diversions. In this connection it must be taken into consideration that the minefields will not afford absolutely safe protection in the face of a determined opponent. Thus the possibility must be envisaged that, even if the first wave has been successfully transported, the enemy will still be able to penetrate with resolute Naval forces so as to place himself between the first wave, already landed, and the succeeding transports. The presence of strongly guarded enemy bases within our area of transportation calls for the sealing, at several places, of our transport routes against enemy attacks. The extension of the transport area involves a very considerable extension of mine-fields, and therefore a larger overall use of forces for this purpose.

g) The great effect of air attacks on defensive installations is undeniable, as shown by the Western campaign. The nature of anti-invasion

defences on the enemy coast however, and the detailed preparations against invasion, which he has been making for a considerable time, cause doubt as to whether the Luftwaffe will succeed in eliminating defensive troops on the coast sufficiently to allow a landing to take place, and without any effective artillery support from seawards.

These reflections cause the Naval Staff to see exceptional difficulties in various aspects of the project, difficulties that cannot be assessed individually until a detailed examination of the transport problem has been made."

20) B. The Discussion Between the Chiefs of the Armed Forces and the Führer on 21st July

In a discussion between the Heads of the three Services and the Führer on the 21st July, the latter stated his view that a decision of the war had already occurred, but that England had not yet recognised this or was still hoping for a turn of fate. He referred to the support of England by the U.S.A. and to the possibility of a change in German political relations with Soviet Russia. A rapid conclusion of the war should be aimed at, although there was no urgent necessity for this. The execution of "SEALION" must be regarded as the most effective means towards this end.

The Führer described the proposed landing in England as an exceptionally bold and daring under-

taking: "even if the way is short, this is not just a river crossing, but the crossing of a sea which is dominated by the enemy. This is not a case of a single crossing operation as in Norway; operational surprise cannot be expected; a defensively prepared and utterly determined enemy faces us and dominates the sea area which we must use. For the Army operation 40 divisions will be required; the most difficult part will be the continued reinforcement of material and stores. We cannot count on supplies of any kind being available to us in England. The prerequisites are complete mastery of the air, the operational use of powerful artillery in the Dover Straits, and protection by mine-fields. The time of year is an important factor, since the weather in the North Sea and in the Channel during the second half of September is very bad and the fogs begin in the middle of October. The main operation would therefore have to be completed by the 15th September; after this date co-operation between the Luftwaffe and the heavy weapons becomes too unreliable. But as air co-operation is decisive, it must be regarded as the principal factor in fixing the date.

The Fuhrer wished to be advised as soon as possible as to whether the contemplated date could be maintained and whether satisfactory operational prospects really existed. Finally, he stated that if the preparations could not be completed with certainty by the beginning of September, other plans would have to be considered.

21) The following questions were put to the Naval Staff:-

- a) By what date can the Navy's technical preparations be completed?
- b) When can the establishment of the artillery be completed?
- c) To what extent can the Navy safeguard the crossing, actively and passively?

The C. in C. of the Navy hoped to be able to give a clear answer to the technical question by about the 25th July, and he emphasised that the Navy could start practical preparations only after air mastery had been achieved.

22) At this discussion the C. in C. of the Navy gathered that the C. in C. of the Army was evidently much inclined to carry out the operation, but that he apparently under-estimated the difficulties of technical preparations and operational execution, as well as the various possibilities of enemy counter-action.

23) Regarding the date, the Naval Staff reported to the Führer on the 22nd July that the preparations could not in any case be completed by the middle of August. The actual date could only be determined when the existence of air supremacy in the Channel Area had become a fact. Only then could ensue the concentration of transports and of mine-sweepers, mine-layers and escort vessels for comprehensive mine-sweeping activity in the whole area.

24) C. The Military Requirements of the Army High Command, and the Attitude of the Naval Staff

The Naval Staff, after studying the Führer's Directive of the 16th July, made the following entry, dated 20th July: "The General Staff of the Army has given its intentions for carrying out the operation, as follows: about 100,000 men with appropriate equipment, including heavy gear, must be transported in the first wave from the area Dunkirk-Cherbourg to the area between Ramsgate and Lyme Bay. Further waves must follow in quickest succession, so that the formation of a local bridgehead may be followed in the shortest time by a war of movement on the Island. This demands the most rapid turn round of transports after disembarkation of the first echelon."

The requirements of the Army High Command resulted in the following Transport Organisation, dated 25th July:-

Army Requirements for the First Wave:

About 90,000 men with appropriate war equipment, 650 tanks, 4,500 horses; for this purpose the following are necessary:-

For Area Ostend-Boulogne

About 550 barges, 185 tugs, 370 motorboats.

For Area Le Havre - Cherbourg

About 45 ships, 90 barges, 30 tugs, 180 motorboats.

In addition, the Luftwaffe, to meet the demands

of the General Staff, requires the transportation of about 52 A.A. batteries in the first wave. According to present calculations of the Naval Staff, this additional requirement can only be met to the extent of 30 per cent, because of the lack of shipping space and harbour facilities.

The transportation of the first wave, including 30 per cent of the A.A. batteries, alone involves 100 per cent utilization of the available ports of embarkation.

In the second wave the Army High Command requires the transportation of 160,000 men with equipment. The shipping space for this purpose amounts to 2,000,000 tons. This is not available, neither could it be accommodated in the area of embarkation. A simultaneous transportation of the second wave is therefore not possible; indeed, it is necessary to spread this wave over 4 or 5 echelons at intervals of 2 days. The shipping space for the second wave, (including another one third of the A.A. batteries) has to accommodate a total of about 170,000 men, 57,500 horses, 34,200 vehicles - and for this purpose the following are needed:

760 transport barges
187 tugs
574 motorboats
100 transports of 440,000 G.R.T.

The above will be reinforced by the 45 transports of the first wave as soon as their first transportation task has been completed.

The total requirement of shipping space for operation "SEALION" is calculated by the Naval Staff on

the basis of the preceding data, with a 10 per cent margin, as:-

1,722 barges
471 tugs
1,161 motorboats
155 transports

The Naval Staff commented that the whole of the transportation of all the waves must be carried out with this total shipping. We shall see later to what extent the availability of shipping space actually corresponded to the above estimate.

25) On the 29th July the Naval Staff summarised the Army General Staff's requirements as follows:-

a) The Army requires the transportation of 13 landing divisions (about 260,000 men). In view of their anticipated tasks, the Army High Command regards this as the minimum number, from which no departure can be permitted, even if there are difficulties in transportation. This is a considerable reduction compared with the original requirement of the Führer (on 21st July) of 40 divisions. (See paragraph 20).

b) These 13 divisions must attack the English coast on the widest front (from Ramsgate to Lyme Bay); which means that they must leave the French coast as far as possible simultaneously, and on the widest front.

c) The landing divisions must be ready for operations in England within the shortest time, that is, within 2 to 3 days. A period of 10 days

for the transportation as provided by the timetable for the second wave, is unacceptable to the Army.

- d) The landing divisions must include sufficient heavy artillery, (for own use and for setting up along the English coast) and A.A. batteries (for A.A. protection and for anti-tank defence).
- e) The Army General Staff requires the landing to take place at dawn.

26) On the 30th July the Naval Staff, reviewing the current state of naval preparations and the probable future rate of progress, concluded that operation "SEALION" could not be carried out before the 15th September; by which time, according to the Führer's view (see paragraph 20), the main operation should already have been completed because of the bad weather to be expected in the latter half of the month.

27) The attitude of the Naval Staff towards all these military requirements and to the problems of weather, tides, transport and enemy action found expression in a comprehensive Memorandum which can be summarised as follows:-

- 1) For navigational reasons the optimum period for the landing is two hours before High Water. For military reasons - as required by the Army High Command the landing must take place at dawn. Thus the crossing of the Channel and the approach to the coast must occur mainly during darkness, and with the mass of transport

craft, which are difficult to move and manoeuvre, a certain amount of light (half-moon) is desirable. The fulfilment of these three requirements limits the period to a few days in any month. Moreover, a landing on the enemy coast is only possible with a strength of sea up to 2.

2) The first suitable period, after completion of all preparations, falls at the end of September, that is, at a time when long spells of fine weather can no longer be expected.

3) Even if the transportation of the first wave should succeed through particularly favourable weather, the time-table transfer of the further waves cannot be guaranteed, owing to the large intervals in the schedules for the further shipping.

4) Full consideration must be given to the enemy's Fleet and to his other means of defence at sea. In view of the weakness of our own naval forces, the enemy's penetration into the area of transports cannot be effectively prevented, because of the size of the crossing area, and in spite of the flanking minefields and our own air superiority.

5) With the available shipping space the minimum interval between the first and second waves will be 48 hours. The transportation of the second wave will finish 8 - 10 days later, at the earliest.

6) For reasons given above the Operations Division of the Naval Staff felt that it must recommend the postponement of the operation until next year, but proposed continuation of the preparations in case the unrestricted air war, together with the naval measures, should cause the enemy to negotiate with the Fuhrer on the latter's own terms. If this should not materialise, the question of invasion would again arise in May 1941.

28) The Naval Staff Memorandum received the full concurrence of the Commander-in-Chief of the Navy, and on the basis of the foregoing deliberations he rejected a landing on a broad front, as offering no prospect of success. He considered that in certain circumstances "SEALION" could be carried out, but only if the transport operation were confined to a narrow front in the narrowest part of the Channel.

29) On the 31st July the Commander-in-Chief of the Navy spoke to the Fuhrer in the sense of the above memorandum and reported to him that the earliest date for commencement was the 15th September. The following were present at this meeting:

Chief of Staff of the Supreme Command of the Armed Forces,
Commander-in-Chief of the Army,
Colonel-General Halder (Chief of Staff of the Army), and
General Jodl (Chief of the Operational Staff of the Armed Forces).

The Fuhrer fully realised the difficulties

enumerated by the Commander-in-Chief of the Navy, and agreed that 15th September should be anticipated as the earliest commencing date. A definite decision would be reached after the Luftwaffe had made an intensified eight-day attack on Southern England. If the Luftwaffe failed to achieve considerable destruction of the opposing air forces, harbours and naval forces, then it would be a case of postponing the operation until middle of May, 1941.

30) D. Crossing on a narrow or a broad front?

As explained in Chapter I, paragraph 4, the answer of the Naval Staff to the Supreme Command's question about the most suitable area for a safe, but broad crossing was as follows:- the area in the English Channel between 1°30' East, and 1°30' West. This corresponds on the English coast to points between North Foreland and the western end of the Isle of Wight. This answer largely met the desire of the Supreme Command to land on a broad front. But obviously the Naval Staff did not intend this definition to mean that the landing fleet should occupy the whole width of the area, but only that within these limits the landing should occur at a place still to be determined. When by the Directive of the Supreme Command, dated 16th July, the Army General Staff required a landing on a broad front from Ramsgate to Lyme Bay, the Naval Staff was confronted with an entirely new situation, which incidentally extended the original

area by 60 miles to the west. "Whereas so far the crossing was expected only in the narrow part between Etaples-Hastings and Calais-Deal, the western transport route had now been extended to the line Cherbourg-Lyme Bay." This involved the use of larger and faster ships for transportation. At this time there was no naval comment on the possibility of transportation on such a wide front. This comment occurred only on the 30th July, after the Army General Staff had sent its precise requirements to the Navy, in which Ramsgate to Lyme Bay were given. (See Para. 32). The Commander-in-Chief of the Navy, agreeing with his Staff, rejected the landing on a broad front, and on the following day reported to the Fuhrer that the only possibility was the narrow front in the narrowest part of the Channel. Only there could the Navy safeguard the crossing against enemy action.

Evidently the Commander-in-Chief of the Navy left this discussion, at which the Navy's difficulties had been fully appreciated by the Fuhrer, with the conviction that the latter would decide accordingly. For on the following day the Naval Staff ordered that all current preparations should be switched to the area on both sides of the Straits of Dover, since the crossing area was now to be between Etaples-Beachy Head and Dunkirk-Deal.

31) A memorandum from the Naval Staff to the Commander-in-Chief of the Army stated clearly that the

transportation of troops could only be guaranteed in the area of the Straits of Dover, and that in this narrow area a constant stream of shipping was considered possible. It is certain that the Commander-in-Chief of the Navy, in view of his talk with the Führer, had expected the latter to order the crossing on the narrow front. But this did not materialise. Indeed, already on the 1st August, on the day after the discussion, the Führer decided - evidently under the influence of the demand from the Commander-in-Chief of the Army - that preparations for a broad front were to be continued. A discussion between the Commanders-in-Chief of the Army and Navy on 5th August resulted in no agreement. The Army had newly introduced a requirement for the landing of 1 to 1½ Divisions by air in Lyme Bay for the purpose of occupying a harbour for use by further transports. The Commander-in-Chief of the Navy thought that the Army Commander-in-Chief was unconvinced of the difficulties in carrying out a landing on a broad front. In further discussions between the two Staffs an effort would be made to eliminate these serious divergencies.

32) On the 7th August - late indeed - the first verbal discussion took place between the Chief of the Army General Staff, Colonel-General Halder, and the Chief of the Naval Staff, Admiral Schniewind. There was a strong clash of opinions between the two. The Chief of the Army Staff said that limitation of the

area of transportation to the Straits of Dover was unacceptable. According to the General Staff it was essential to land in the West with powerful Army forces, at least four Divisions in the Brighton area, - in order to be able to attack on the flanks from there. The nature of the terrain there would seem to offer prospects of a rapid advance in an easterly direction. On the other hand, the hinterland in the area Dover - Folkestone was extremely unsuitable for a frontal attack; here too, relieving attacks on the flank would be required. Hence the General Staff attached the greatest importance also to simultaneous landings in the area Deal-Ramsgate. The General Staff also required that at least 10 divisions be landed within four days in the general area between Ramsgate and Brighton. Only in the above circumstances could the first target be achieved, which would lead to the success of the final operational objective, viz., the line from the mouth of the Thames to Southampton. During the discussion Colonel-General Halder drastically stated: "I utterly reject the Navy's proposal; from the point of view of the Army I regard their proposal as complete suicide. I might just as well put the troops that have been landed straight through ^{the} sausage machine!" Thereupon the Naval Staff pronounced that for similar reasons it must reject landing on a broad front; that it must regard the broad front not only as suicidal, but as a sacrifice of the troops on their way to land. The limitation to Brighton Bay could be

regarded as a rapprochement by the General Staff to the point of view of the Naval Staff, but the latter thought Brighton as difficult as Lyme Bay in regard to weather, enemy interference, and unloading of stores. Hence the Naval Staff rejected this proposal also, while the Army Staff regarded the narrow landing as an irresponsible measure, both tactically and operationally. The General Staff maintained its demand for a dawn landing, although the Naval Staff again strongly emphasised the difficulties and military disadvantages of transportation by night. The Army Staff counted on the possibility of tactical surprise, which the Navy regarded as out of the question.

33) The Naval Staff raised a further objection to the broad front landing, in that there would be a big difference in the times of high water (3 to 5½ hours) between the western landing area and Dover. Either the unfavourable tide must be accepted, or simultaneous landings must be renounced. A further argument by the Naval Staff against the western landing was that "Naval Forces, and also the large contingents of the Army, would be exposed to heavy losses which might jeopardise not only the western landing, but also the success of the whole enterprise." This danger was considered all the greater since the attenuation of transports towards the west would greatly weaken the main area of transportation, which might result in failure at this decisive point.

34) In a General Staff memorandum to the Supreme Command dated 10th August, it was again maintained for operational reasons, that simultaneous landings at and to the west of Brighton were necessary. For similar reasons abandonment of the landing in Lyme Bay was viewed with the greatest reluctance.

35) Differences of opinion existed also between the Army and the Air Force. The Commander-in-Chief of the Air Force wished to use paratroops and airborne troops only after the establishment of the bridgehead, while the Army General Staff wanted the employment of paratroops during the gaining of the bridgehead.

36) When addressing the Führer on the 13th August, the Commander-in-Chief of the Navy asked for an early decision in the question of the width of front. In discussions at the Führer's Headquarters on the following day the Chief of the Operations Division of the Navy made proposals to General Jodl, and these, as will appear later, cleared the way for the compromise which led to the Führer's final decision. They were:-

1) Basic restriction of the operation to a narrow front, but initiation of preparatory measures for a wide front.

2) Renunciation of the Army's demand for landing major forces at Brighton, since subsequent reinforcements of troops and supplies would not be possible in this sector.

37) General Jodl agreed ~~in~~ principle, and evidently

using these proposals as a basis the Supreme Command on 16th August issued a Directive on the following lines:-

Main crossing to be on narrow front, simultaneous landing of four to five thousand troops at Brighton by motor-boats and the same number of airborne troops at Deal-Ramsgate. In addition on D-1 day the German Air Force was to make a strong attack on London, which would cause the population to flee the city and block the roads.

Accordingly, the Naval Staff on the 20th August, ordered the Naval Command West to make preparations for the transportation of troops to the Brighton area, but only in so far as would allow for a single crossing of a strong contingent of troops for diversionary purposes. The Naval Staff defined "a strong contingent" as a powerful assault unit without heavy arms or heavy equipment, which was to be ferried to the Brighton area by the motor boats and motor sailing vessels lying at Le Havre; while the reinforcements, heavy equipment and supplies for this contingent were to be transported on the left wing of the main crossing area (Beachy Head) and after landing, were to be sent on by road. Only if the situation developed particularly favourably in relation to the enemy were these supplies to follow the motor boat flotillas by direct sea route. In the main crossing area the Naval Staff hoped, if weather were good, to land

both echelons of six divisions each within six days by continuous traffic in the coastal sector Beachy Head-Dover.

38) On the 21st August the Supreme Command concurred with the above intentions of the Naval Staff for the transportation from Le Havre.

A discussion with the Head of the Operations Division of the General Staff showed however that no agreement existed as yet in regard to the movement of transports between Le Havre and Brighton. The General Staff rejected the interpretation of the Naval Staff, but regarding the Brighton landing not as a mere raid, wanted to have a whole army transported there, including heavy equipment, which had already been collected in the area of Le Havre; instead of the 25 steamers to be provided there, the Army General Staff wanted 70 steamers which were to be routed either direct, or through the main transport area via the Dover Straits, and thence along the English coast to Brighton.

39) The Naval Staff rejected this demand, but after further investigation tried to reconcile the General Staff by suggesting to them and to the Supreme Command on the 23rd August that 50 steamers should be loaded and despatched from Le Havre; half of these would follow immediately behind the motor-boats - if there were no enemy opposition - while the remainder would be sent by the main crossing route and then on to Brighton.

But the Commander-in-Chief of the Army rejected

this compromise also and proposed to report accordingly to the Führer. By this time the Supreme Command had associated itself with the view of the Naval Staff, who therefore anticipated the Führer's approval of their latest proposal.

- 40) Actually the Führer, in the Supreme Command Directive dated 27th August, decided that "the Army operations must allow for the facts regarding available shipping space and security of the crossing and disembarkation." Accordingly, should the enemy situation be favourable, 25 transports in a single journey, in company with motor boats, were to proceed direct to the landing area at Brighton, while the remaining 25 steamers were to proceed via Boulogne-Beachy Head after the enemy coast had been occupied, and were to endeavour to make contact with the units already landed at Brighton.
- ° This compromise solution which did not fully meet the operational needs of the Army, and probably lessened the prospects of the landing forces, was unavoidable, having regard to the transport situation. The Naval Staff believed that a decision in favour of the Army's requirements would have involved risk of failure for the whole enterprise.

41) E. Intelligence of the Enemy

Following on the Führer's decision of 27th August, which clearly defined the crossing area in the Channel, a decision could be reached as to which individual sectors of the coast were to be used for the

landing. Factors governing their selections were, firstly, the geographical features of the coast and the hinterland, and secondly, the available intelligence on the enemy's local defence measures and operational intentions.

The coast on both sides of Deal was rejected by the Naval Staff as unsuitable for landings, because for navigational reasons the approaching landing fleet would have to hug the coast through the Downs; and this appeared to be feasible only if enemy opposition from the coast was no longer to be expected. After the Führer's decision of 27th August a landing in this area was ruled out, although it would have materially improved the military conditions for landing.

From South Foreland to Folkestone the coast consists of steeply descending chalk cliffs, which would present difficulties for a landing. Not until west of Folkestone does the high ground recede and the foreshore becomes low-lying up to well beyond Dungeness. Between Folkestone and Dungeness the coast forms a wide bay sheltered against westerly winds, with a flat beach, shelving gently. The approach to the bay from the French coast is hindered by the banks in the line of approach, viz., the Varne and the Ridge, which can be crossed at high water; but continuous shipping would have to pass round them. The coastal sector 14 miles long, from west of Folkestone to Dungeness, was selected by the Naval Staff as landing area B, and was allocated to the landing

flect that was to sail from Rotterdam, Ostend and Dunkirk. A landing area A, presumably the area Deal-Ramsgate, was no longer mentioned at this juncture, since the plan to land there was dropped at an early stage. .

The coast between Dungeness and Cliff's End is also low and here forms Rye Bay, where depths increase very slowly. West of Cliff's End as far as Hastings there is no possibility of landing, as the coast is steep and rocks and reefs are found off shore, with many rocks also on the flat beach. The length of coast between Dungeness and Cliff's End, 11 miles long, was allocated, as landing area C, to the transports which were assembled at Calais.

The coast line between Bexhill and Beachy Head, about 11 miles long, is also low, with a flat beach; but off shore there are a number of reefs and rocky shallows, which restrict the area suitable for landing to about 7 miles. This was designated landing area D, and allocated to the transports that would sail from Boulogne.

In the sector between Beachy Head and Brighton, the chain of hills of the South Downs comes right up to the coast. From the beach access to the heights of the chalk cliffs is possible only at a few places (Birling Gap and Crowlink), and even here it is difficult. West of Brighton the hills of the South Downs gradually recede and the coast line

consists of low land with a wide beach, which dries extensively. In spite of the favourable conditions for approach, the Naval Staff considered a major landing between Beachy Head and Brighton impossible, because of the steep foreshore, the rocky beach and the obstacles that lie off shore in several places.

On the other hand the coastal sector from Brighton to Selsey Bill appears suited for a landing in spite of some sandbanks off shore, since the land is low lying, and at Brighton and Worthing the beach is sandy, while west of Worthing is a broad bank, and there is a good shingle beach from Pagham to Selsey Bill. This stretch of coast, 21 miles long, formed landing area E, to be used by the forces from Le Havre.

42) It was the task of the High Command of the Army to pronounce on the conditions of terrain of the hinterland and the consequent possibilities of operations. On this subject the memorandum submitted by the Commander-in-Chief of the Army to the Supreme Command on the 10th August contained exhaustive information, and indicated what counter action by the British defences the General Staff anticipated on the basis of the intelligence that was available. The following is a quotation:

"(a) A landing on the English coast only within the limits of Folkestone to Eastbourne is not acceptable.

In this sector we must already reckon with a fully prepared coastal defence, consisting of about four Divisions, apart from the personnel of the coastal fortifications. In the neighbouring

coastal sector, Margate-Folkestone, there are presumed to be two further Divisions, between Eastbourne and Portsmouth two more.

If these are not themselves attacked, they can at least, with their reserves, come to the assistance of the Folkestone-Eastbourne sector. Behind these forces the British Command is sure to have available between London and Salisbury at least five operational Divisions, of which one is Armoured; in case of necessity there will be available one further division at Chatham, and one in London. Thus the landing troops, which, because of the incalculable nature of the crossing and of the landing, will lack cohesion, will face numerical superiority which can only be mitigated by the simultaneous landings on as wide a front as possible.

Compensatory action by operational use of the Luftwaffe is restricted because of its task over the sea; there is also the well-known difficulty of scanning the landscape from the air, which limits effective action in support.

The terrain in this relatively narrow sector is exceptionally unfavourable for all arms, particularly for operating high speed units. The salient arc between Dungeness and the Military Canal as well as the coastal sector between Bexhill and Eastbourne are marshland, veined by numerous waterways - ideal for the

enemy's defence, but impossible for operation by our tanks. Commanding heights surround the whole landing front in a semi-circle and provide the English with a natural defence position. Only if particularly advantageous circumstances develop - and this is not anticipated - can a rapid advance from the narrow and unfavourable bridgeheads be expected, with a view to the capture of Dover and the elimination of the coastal defences at Deal.

The duration of the crossing is much too long. Even if the first echelons of 6 divisions are successfully thrown ashore for the formation of narrow bridge-heads, the result of the initial battles against considerably superior forces seems questionable, when it takes 6 days to land the second echelon of these divisions together with the essential Army troops. Even if, in face of interference through weather and British Naval forces, it is optimistically supposed that this task will be fulfilled, a further six divisions, particularly infantry forces and A.A. batteries, would have to be awaited before operations could develop from the narrow bridgeheads against the Thames-Southampton line (first operational objective).

Thus the advance could hardly commence until 14 days after the landing. This interval however gives the enemy the opportunity - in case he does

not prefer offensive operations during the first period of our numerical inferiority - to build up sufficient defence forces on a general line between Chatham and Brighton, and to organise the defence in such a way as to preclude the possibility of a quick break through by our forces. And so the conditions for rapid success in England would disappear.

Hence the landing in this sector alone presents itself as a frontal attack against a defence line, without good prospects of surprise, with insufficient forces, on too narrow a front, and which would receive only dribblets of reinforcements.

(b) The Army High Command must therefore also require that, starting from Le Havre, a simultaneous landing be carried out at and west of Brighton. Only by the extension of the landing area will it be possible to surprise the British forces, who would presumably be less likely to expect a landing in this locality; and thus, by local success to confuse him, thereby materially improving the prospects of general success.

If, as must be expected from recent intelligence, the British defence is conducted on an offensive basis, then the enemy forces will be dispersed.

In case of a strictly defensive conduct of the enemy's operations, the formation of an English defence front on the line Chatham-Brighton will be rendered impossible from the start, and pressure will be brought on the English, which could lead to the rapid abandonment by them of the whole area south and south-east of London; in that event the prospects of a landing soon afterwards at Deal would be improved.

The terrain at Brighton is particularly suitable for operations by fast moving units.

Only if on this broad front sufficiently strong forces, adequately and quickly supplied, are thrown in simultaneously, does the prospect arise of quickly gaining the first operational objective (mouth of Thames to Southampton) and so creating the conditions for further rapid and successful operations."

43) At this time the Army High Command assessed the total strength of the units available in England for operations, including coastal defence troops, but excluding anti-aircraft units, as 320,000 men; the strength of the reserve army as 100,000 men; men under training as 900,000 recruits, and the total number of men called to the colours as 1,640,000. According to unconfirmed reports received up to the 15th August by the German General Staff, the number of divisions at home in England amounted to 39, of which about 20 were regarded as completely

operational, but whose artillery was believed to be at only half the normal strength.

As regards the defence arrangements in the coastal area, the General Staff learned by the 5th September that the region Tonbridge - Beachy Head was characterized by a large and excellently camouflaged labyrinth of fortifications. Hastings was described as a strongly established centre of defence. Further reports from England mentioned the Isle of Wight as the most fortified part of the English South coast, as German landing attempts were particularly expected there.

Further, the General Staff learned - not, however, until the 9th October - that the coastal sector of Brighton - Dover was defended as follows:

- (i) The first line on the coast.
- (ii) 300 yards from the coastline: machine gun nests.
- (iii) 1,000 yards inland: heavy long range guns at intervals of about 800 yards.
- (iv) 3,000 yards inland: a line of light artillery and machine gun nests.
- (v) $2\frac{1}{2}$ miles inland: a line which includes armoured cars and tanks, said to amount to 230 tanks and 380 armoured reconnaissance vehicles. Total strength of troops in this line about 75,000 men bearing numbers 83, 85, 86, 95, 97, 98, 104, 106 and 107.

Behind these lines, as a reserve, there are about 50,000 men in a zone about $12\frac{1}{2}$ miles deep, who are distributed on the same principle as the first lines of defence.

The data received by the General Staff for its appreciation of the enemy's position came mainly from

the Secret Service Department of the Supreme Command, and also from captured material.

44) The War Diary of the Naval Staff contains the following remarks on intelligence of the enemy:

- (i) On the 17th July "the whole foreign Press, in particular the English Press, comments that a major German attack is expected. Thousands of barges and vessels are said to be standing by on the Channel and Atlantic coast. The attack is expected in the Dover area, though the defences here are strongest. Strong air attacks lasting several days will precede the landing."
- (ii) On the 19th July "English defence measures (from an American report): coastal defence by the Army. Defence is based on mobility and concentration of all available fire-power. No fixed defence line with built-in defences. The task of the Fleet and the R.A.F. would be to render impossible the landing of armoured units or surprise landing by troops. The R.A.F. is so organised that strong units can be quickly concentrated at any danger spot, and also to attack the new German bases in Northern France and Holland and to search for indications of German activity, such as the

assembly of ships and barges."

- (iii) On the 15th August "talk of a German invasion continues to appear in the English Press. The possibility is mentioned of a landing on the North-East coast of England, probably originating from Norway. The stronger German air attacks are regarded as preparations for the invasion, and the activity of German minesweeping vessels in the Channel as advance indications of a landing. The concentration of ships in the Baltic and in the Norwegian fjords is mentioned."

The Naval Staff's appreciation of the enemy's position at the date for which the invasion was planned will be given later (see paragraph 68 below).

45) F. The Diversionary Measures Planned by the Naval Staff

As mentioned above, the English Press quoted as a possibility the landing on the North-East coast from the direction of Norway. Actually the German Naval Staff had prepared a fairly extensive operation, with the object of a feint landing on the North-East coast. This was the so-called operation "Herbstreise" (Autumn Journey).

This operation aimed at creating a diversion on land and at sea from the real landing which was to take place two days later on the English South coast. For this purpose the Naval Staff was anxious that intelligence as to the feint operation should reach England. If the occasion arose during the operation,

the enemy was to have his attention called to it by conspicuous W/T traffic. The Publicity given in England in the middle of August to this plan of the German landing on the North-East coast corresponded to the wishes of the Naval Staff and can perhaps be traced to intelligence issued by the latter.

For this feint operation transports from Norwegian traffic - including the liners "EUROPA", "BREMEN", "GNEISENAU", "POTSDAM" and a few trawlers - were to be formed on D minus 2 day into four convoys; they were to proceed from the area Bergen-Christiansand - South, and from the German Bight under escort of the cruisers "EMDEN", "NÜRNBERG", "KÖLN", "BREMSE" with accompanying light escort forces, and were to advance towards the English coast between Aberdeen and Newcastle. In the event of contact with the enemy he was to be attacked if in inferior strength, but was to be avoided if superior. In the latter case the convoys were to be immediately diverted and scattered, and the ships were to proceed to the nearest harbours. When darkness set in, about 2130, the advance was to be broken off and the return journey commenced. By this time the individual formations would have got about half-way to the Scottish coast. By dawn the large liners were to have disappeared in the direction of the Kattegat, while the less conspicuous remaining steamers were to try to mingle with the Norwegian coastal traffic. In case the situation warranted it, provision was made for a repetition

of the feint on D minus 1 day. The operation was to be under the Commander-in-Chief of the Naval Group North, Admiral Carls.

At the same time as "Herbstreise", the Naval Staff planned - also for diversionary purposes - an operation by the heavy cruiser "Hipper" in the area of Iceland-Faroes. In addition, at the time of SEALION, the pocket battleship "Scheer" was to make a sortie into the Atlantic for commerce raiding, from which the German Naval Staff also expected a diversion of British Naval Forces.

CHAPTER III

THE CARRYING OUT OF THE NAVAL PREPARATIONS *

46) In the sphere of naval preparations, the requisitioning, equipment and assembly of the shipping required for the transportation constituted a most extensive task, which occupied a great deal of time.

The Naval Staff on 25th July calculated the total shipping space (see paragraph 24) as 155 transport vessels (about 700,000 G.R.T.), 1722 barges, 471 tugs and 1161 motor boats. At the same date the Naval Staff's scheme for ships to be made available was as follows:

About 140 transports, of which 100 to be taken from German shipping, 40 from Holland, Belgium and France; this amounted to 440,000 G.R.T. of German shipping, and 200,000 from the other countries.

About 2,000 barges from the Rhine and from Holland.

About 500 tugs from Germany, Holland, Belgium and France.

The number of motor boats that could be requisitioned was at this time not yet determined.

The withdrawal of this shipping from its previous employment involved serious inroads into the German economy. The number of available merchant ships in Germany, suitable for transportation of troops was limited, and had been sensibly reduced by heavy losses in the Norwegian operation, and through mines. Of the 1,200,000 G.R.T. which were available to German industry at the beginning of July, 800,000 G.R.T. were employed in coal and ore traffic and 400,000 G.R.T. on coastal traffic. The reduction

* Note: See Appendix on page 82A for organization of German Naval Forces.

of this tonnage by 440,000 G.R.T. would, according to the Transport Section of the Naval High Command, have a serious effect on German shipping, especially if withdrawn over a long period; moreover, further ships would have to be laid up in order to make crews available for the steamers lying in Holland, France and Belgium. The position was no easier in the case of German inland shipping. The transport situation on the German inland waterways had already been severely strained. Figures provided by the Reich Ministry of Transport showed that German inland shipping would be reduced by 30 per cent to meet the requirements of the invasion, and that the effect on the supply of coal, ore and food would be considerable. The requirement of tugs could only be met if nearly all tugs over 250 h.p. were withdrawn from the German harbours and if all trawlers still being used for deep sea and coastal fishing were requisitioned. This would practically stop the supply of fish. The requirement in motor boats could only be met if use were made additionally of the motor boats from inland lakes, most of which were unseaworthy.

47) All these serious disadvantages had to be accepted if SEALION were to be prepared, and they were accepted. The requisitioning of shipping space proceeded generally according to plan. On the other hand the movements of transports at sea and on the inland waterways, which were essential to bring the vessels to the yards for alterations, and to the operational harbours, lagged

behind schedule. This delay was caused by the weather, abnormally bad for the time of the year, and by the effects of enemy air activity, which reacted not only on the movements but also on the concomitant mine-sweeping operations. Also, the ten-day blocking of the Dortmund-Ems Canal, caused by bombs in the middle of August, resulted in a considerable hold-up in the assembly of motor boats coming from the Rhineland. As a result of these delays the Naval Staff on 30th August was forced to report (see paragraph 57) that D.Day must be postponed from the 15th September to the 21st September.

48) On the 4th September the shipping section of the Naval Staff was able to report that 168 transports (704,548 G.R.T.), 1910 barges, 419 tugs, including trawlers, and 1600 motor boats had been requisitioned. By the 6th September all the steamers would be available for use. Most of the remaining vessels had already been assembled at the embarkation ports or were on the way there. The transport section expected that the whole of the transport fleet would be ready for use by the 19th September.

On the 11th September the Naval Staff remarked that owing to the unfavourable weather and the effect of the enemy's air threat and mining operations, various interruptions had occurred in the assembly of the transport fleet and light naval forces, which however had not affected the time-table preparations for the operation.

49) On the state of minesweeping operations, the Naval Staff on 4th September established that searching and sweeping operations had been seriously delayed during

August by the unfavourable weather. The maintenance of sorties in the Dover Straits, particularly in the British mined area west of the Dover-Calais line, had only been possible in the south-eastern part. Mines or other obstructions had not been located. The Naval Staff hoped by the 19th September to clear up the mine situation west of Dover-Calais, particularly in the British mined area which had been presumed to exist. But it was doubtful whether it would be possible by searching operations to obtain a picture of the mine situation close to the English coast. Later, not until the 9th October, the Naval Staff learned that mines had been laid ~~14~~ miles off the coast between Dover and Brighton, which were believed to be connected by cables to positions on land.

50) For the tactical minefields planned by the Naval Staff to protect the flanks of the crossing area, a total of 6,800 mines, including 800 dummy mines, and the necessary anti-sweeping equipment had been got ready by the 4th September. The transfer of this gear to the operational harbours was in process, and would be definitely completed by the 19th September. It was intended to carry out the mine-laying operations in the period D - 8 to D - 2; the intended position of the minefields can be seen in the sketch overleaf

The average distance between mines in the individual minefields varied between 100 and 180 feet. The Anglo-French minefields in the Channel between

Dover and Calais and in the area off Dunkirk were incorporated into the German mine system, as constituting an effective protection. (In the sketch these are indicated by broken lines).

51) On the 6th September, the Admiral Commanding U-boats proposed the following distribution of boats for the protection of the crossing:-

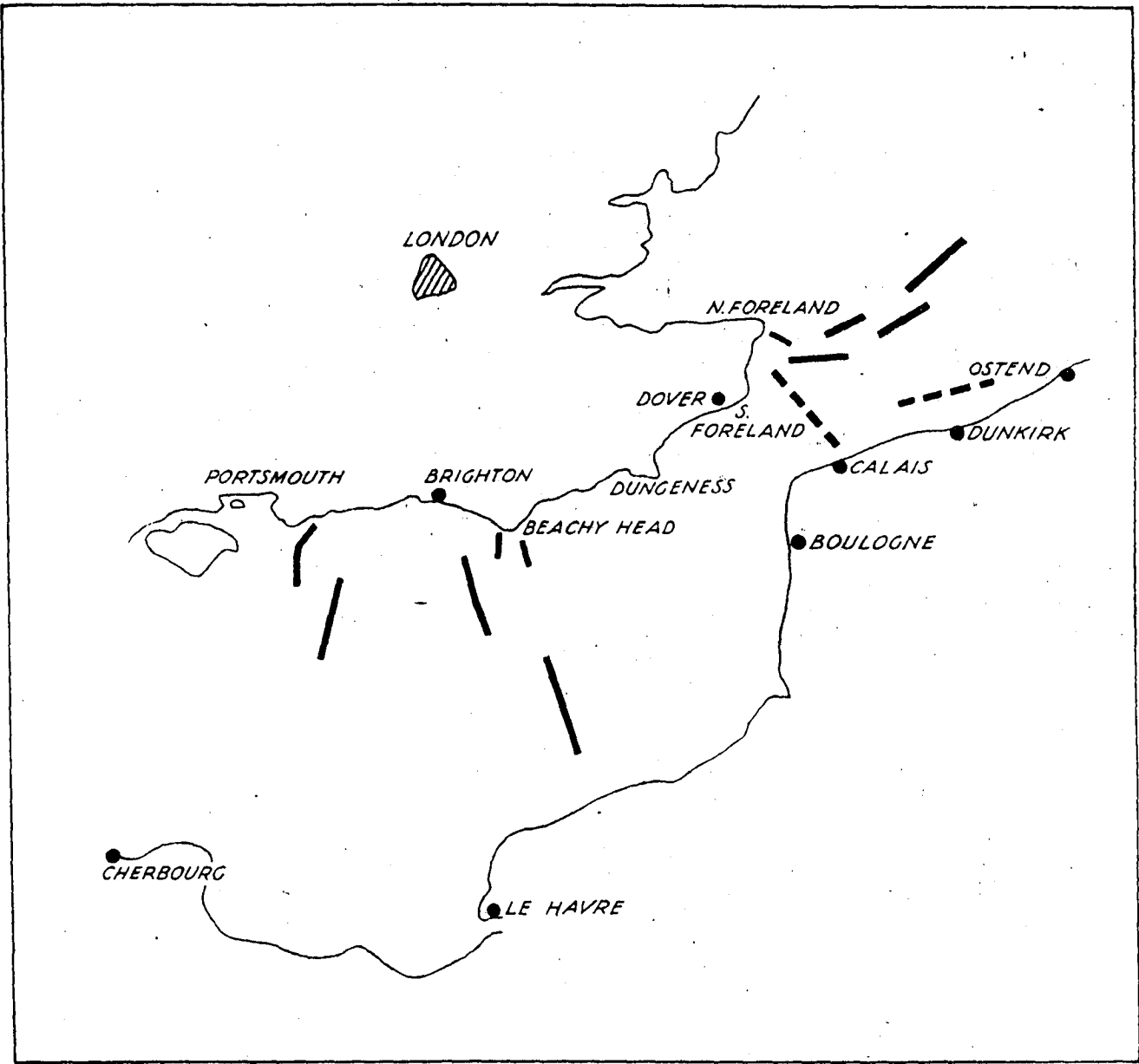
- 1) In the Channel: main northern concentration:
 - a) 5 medium boats in the area Scillias - Lizard Head.
 - b) 5 medium boats between Start Point and the Channel Islands.
 - c) 5 small boats between Isle of Wight and Barfleur.
- 2) In the North Sea, south of line Cromer-Terschelling:-
 - a) 3 small boats between Cross Sand and Outer Gabbard.
 - b) 3 small boats east of the English danger area.
- 3) Off Longstone:

2 small boats on the English coastal route.
- 4) Off the Pentland Firth:

4 small boats west and east of the exits.

The Naval Staff agreed to these proposals.

52) It was laid down that the authority for issuing orders during the crossing would be vested solely in the Commanders of the Naval groups, who would also decide on the use of weapons in the event of enemy interference. Basically, protection against enemy forces was the task of the escort forces allotted to the transport fleets. Vessels carrying only the weapons appertaining to Army



troops were to be allowed to use these weapons only in extreme necessity.

For carrying out the first landing, advance companies with a total strength of 8,520 men were formed, and these were to be embarked in warships of the escort forces. Artificial fog was to be used only by naval forces or by aircraft. The order for its use would be given by the appropriate naval commander, in agreement with the Army commander embarked in the Senior Officer's ship. Similar rules applied for the order to open fire, which was only to be given in case of enemy interference. Otherwise the aim was to achieve surprise.

For the purely naval tasks connected with disembarkation of the troops, such as control of transport traffic, establishment of navigational aids etc., 14 naval landing units, each consisting of 2 officers and 40 men, were formed and allocated to individual groups of transports.

53) The setting up of coastal artillery along the channel coast, as ordered by the Führer, was completed by the middle of September, and the following were then ready for use:

- a) Siegfried battery, south of Gris Nez with four 38 cm.guns.
- b) Friedrich August battery, north of Boulogne with three 30.5 centimetre guns.
- c) Grosser Kurfürst battery, at Gris Nez with four 28 centimetre guns.

- d) Prinz Heinrich battery, between Calais and Blanc Nez, with two 28 centimetre guns.
- e) Oldenburg battery, east of Calais, with two 24 centimetre guns.
- f) M.1, M.2, M.3, M.4 batteries in the sector Gris Nez-Calais, with a total of fourteen 17 centimetre guns.

In addition, according to a notation in the war diary of the Naval Staff, there were thirty-five heavy and medium batteries of the Army, as well as seven batteries of captured guns.

The siting of these batteries, which commenced on the 22nd July, was completed on the 31st August.

CHAPTER IV
AIR OPERATIONS IN RELATION TO THE PLANNING
OF "SEALION"

54) Right from the start the Naval Staff, and the Commander-in-Chief of the Navy personally, took every opportunity of stressing that the most important prerequisite for a successful landing was the achievement of air supremacy. The Führer, in his first SEALION directive of the 2nd July, expressed himself similarly (see paragraph 3). Even in the early period of material preparations, in view of the weakness of our naval forces, it depended on the success of the Luftwaffe, whether the fitting out of the embarkation ports, the equipment and assembly of transports, and the very extensive mine locating and minesweeping operations could take place without serious interference by enemy air and naval forces. Air supremacy - at least a definite air superiority - would have to be a "fait accompli" before these preparations commenced. Air supremacy was of absolutely decisive importance for the crossing, for the landing and for safeguarding supplies during the operation. The Naval Staff also appreciated clearly that air supremacy alone could not provide permanent security against vastly superior enemy naval forces in the crossing area, and the same applied to the protective minefields which were to be laid.

On the 31st July the Führer had informed the Commander-in-Chief of the Navy (see paragraph 29) that

if after eight days of intensive air war the Luftwaffe had not achieved considerable destruction of the enemy's air force, harbours and naval forces, the operation would have to be postponed until May 1941.

On this occasion the Führer also told the Commander-in-Chief of the Navy about the targets the Luftwaffe had been given in connection with the SEALION operation.

55) On the following day Directive No. 17 gave the Commander-in-Chief of the German Air Force freedom to commence the intensified war against England as from the 5th August. But the operational objectives of the air war differed from those which the Führer, on the 31st July, had indicated verbally to the Commander-in-Chief of the Navy; for the Luftwaffe were told to use all available forces to destroy the R.A.F. and the aircraft industry as soon as possible, and after achieving temporary or local air superiority, to concentrate on attacks against harbours and particularly against food supplies and stores. The instructions said that the air war against enemy warships and shipping should take second place, in so far as favourable opportunities for attack did not present themselves.

As affecting SEALION, the Naval Staff regretted the lower priority of the enemy naval targets compared with the other objectives of the Luftwaffe and proposed to appeal to the Supreme Command.

On the 6th August the Naval Staff felt obliged

to report to the Supreme Command that minesweeping and preparations for German minelaying in the Channel area were not yet feasible because of the constant threat from the air, and that consequently the commencing date for SEALION was endangered.

On the 10th August the Naval Staff noted in its war diary: "Preparations for SEALION, particularly mine clearance, are being affected by the inactivity of the Luftwaffe, which is at present prevented from operating by the bad weather, and that for reasons not known to the Naval Staff, the Luftwaffe had missed opportunities afforded by the recent very favourable weather. As the Führer does not wish to decide about SEALION until at least eight to ten days after the commencement of the Luftwaffe's major air attacks, there is already some danger of the date being affected."

56) At the beginning of August the Luftwaffe had at its disposal 2669 operational aircraft, which included 1015 bombers, 346 dive bombers, 933 fighters and 375 heavy fighters. The Commander-in-Chief of the Luftwaffe decided that the major attacks of Air Fleets 2 and 3 were to begin on the 13th August. As a preliminary measure, single dive bomber units attacked Portland and Weymouth on 11th August as well as convoys on the east and south coasts of England. This was followed on the night of the 12th August by attacks on Bristol, Cardiff and Middlesbrough, and on the night of the 13th by operations against Portsmouth, Ramsgate, Middlesbrough, Newcastle and Shields. German losses on these two days amounted

to 53 aircraft, the British losses were given as 176. The major attacks commenced on the 13th August under unfavourable omens; the first few days gave little promise of success. Contrary to the fair weather period to be expected at this time of year, there was one depression after another, weather conditions remained stormy and rainy during the next fortnight, restricting the Luftwaffe operations to single attacks by weaker units. Fighter protection in particular was difficult, and the bomber attacks frequently took place without escort. The enemy's fighter defence, which was less affected by the bad weather during local operations over his own country, proved to be powerful and tough, and German losses were high. In an attack launched by the Luftwaffe on the 18th August without fighter escort German losses were 147 aircraft, as compared with the observed enemy losses of only 49 aircraft. Not until the 24th August did the weather permit day and night operations by powerful squadrons. In the eastern area the enemy's fighter protection was observed to be strong, while in the west it was weaker. On the following days the attacks were continued with good results; the main targets were aerodromes, industrial and harbour installations, (Bristol, Birmingham, Liverpool, Newcastle, Hull, Plymouth). There appeared to be no connection between these attacks and the SEALION plans. On the other hand the enemy's lively air activity - mine-laying, bomber attacks - and the variable and mostly unfavourable weather, all contributed

to delays and losses in the preparations for SEALION.

57) The effect of the enemy's air war and the inadequate German air cover against enemy naval forces caused the Naval Staff on the 30th August to report to the Supreme Command that the terminal date for SEALION preparations (15th September) could not be kept. "The elimination by the Luftwaffe of activity by enemy sea and air forces in the Channel and along the embarkation coast had not yet materialised; and there was no early prospect of improvement while the Luftwaffe pursued its present operational objectives." The earliest day for the readiness of the transport fleet - assuming a favourable development of the German air offensive and a consequent change of Luftwaffe objectives to suit SEALION - was now reported as the 20th September, but again this date could not be regarded as absolutely certain, as it depended on the Luftwaffe's effectiveness in eliminating enemy sea and air forces.

Thereupon the Supreme Command decided on the 21st September as the earliest D.Day and (as proposed by the Naval Staff) intimated that a preliminary order for carrying out the operation would be issued ten days before the date, i.e. on D-10. This postponement was not serious, since the favourable conjunction of moon, tide and daylight had pointed to dates between the 19th and 27th September as being suitable, with the 24th September as the best day.

58) On the 1st September extensive preparations for SEALION began, with the movement of shipping from the German North Sea ports to embarkation ports. During this operation it became evident that undisputed air superiority in the area of the movement of transports, which the Naval Staff had stipulated in order to keep to the time-table, had by no means been achieved. The enemy's light naval forces were moving practically undisturbed in this area, and were threatening German sea communications.

59) The Luftwaffe's view of the situation at the end of August was not unfavourable, in spite of the effect of bad weather on their operations. The Luftwaffe regarded the result of their attacks on the English ground organisation and aircraft industry as considerable and were convinced that the R.A.F. had already been severely damaged. The enemy's losses since the 8th August were estimated as 1,115 aircraft as opposed to German losses of 467 aircraft. Given good weather, the Luftwaffe hoped to increase their successes considerably in September, and expected decisive results.

In the meantime there had been several British bomber attacks on Berlin and this hastened the plan for reprisal attacks on London.

At the beginning of September fine weather set in, and it was used for day and night attacks, principally on the aerodrome installations round London. The R.A.F. fighter defence was weaker than in the previous week. On

the night of the 6th September the first of the stronger attacks, by 68 aircraft took place over London, followed on the 7th September by the first major attack with about 300 aircraft.

Violent actions with enemy fighter forces led to major air battles over London, which revealed the renewed strength of the British fighter defence. This forced us to give equal priority to both the bomber attacks and the systematic engagement of the enemy's fighter defence. Within the Luftwaffe the atmosphere was still elated and confident, through over-estimation of the results achieved, and this exaggerated idea was fed by intelligence received from neutral countries. British attacks increased on the Channel ports, where the invasion preparations were observed. The German air defence was not strong enough to prevent reconnaissance. Considerable losses were sustained by the Germans. In Ostend three motor torpedo boats were put out of action by bombs, and on the 13th September an air attack resulted in the sinking of eighty barges. In addition, the naval measures, mine-sweeping operations and the assembly of the transport fleets at the embarkation ports were repeatedly interrupted by the R.A.F. In spite of continuous casualties in shipping space, the Navy was able to report after every loss that it could be made good by drawing on the reserves which have been held in readiness, and that the invasion preparations were not affected.

60) Meanwhile time was pressing for a decision. In order to keep to D.Day (21st September), the preliminary

order would have to be issued on the 11th September.

The following is a summary of the Naval Staff's appreciation dated 10th September:

Unsettled weather, quite abnormal for the time of year, was considerably affecting the movement of transports and the mine clearance operations for SEALION. "There is no sign of the defeat of the enemy's air force over Southern England and in the Channel area; and this is vital to a further appreciation of the situation. The preliminary attacks by the Luftwaffe have indeed achieved a noticeable weakening of the enemy's fighter defence, so that considerable German fighter superiority can be assumed over the English area. However, as shown by the experience of the last few days, the bombers and mine-laying squadrons of the R.A.F. are still fully operational, and it must be admitted that the operations of these British squadrons have undoubtedly been successful, though serious interference with or prevention of German transport movements has not resulted so far." In spite of interruptions and delays the Naval Staff thought it could still guarantee the completion of preparations as planned, with the earliest D.Day as 21st September. But should further difficulties and interruptions occur through weather or through enemy action, this date would be endangered. "We have not yet attained the operational conditions which the Naval Staff stipulated to the Supreme Command as being essential for the enterprise, namely undisputed air supremacy

in the Channel area and the elimination of the enemy's air activity in the assembly area of the German naval forces, ancillary craft and shipping."

61) It seems appropriate at this stage to say a few words on the attitude adopted by the Commander-in-Chief of the Luftwaffe towards the SEALION operation. From the beginning Reichsmarschall Goering never took much interest in SEALION. He hoped that the air war alone, as conducted by him, would make England ready for peace, and he probably never believed that it would come to an invasion operation. In fact, the Luftwaffe did not predominantly devote its operations to the cause of the planned invasion, but gave priority to the "absolute" air war. Thus the Luftwaffe went its own way, out of step with the invasion plans.

62) The attitude of the Naval Staff towards the objectives pursued by the Luftwaffe is shown by two successive entries in the war diary, which, being characteristic, command attention.

The entry on the 10th September reads:

"It would be in conformity with the time-table preparations for operation SEALION if the Luftwaffe now concentrated less on London and more on Portsmouth and Dover, as well as on the naval forces in and near the operational area, in order to eliminate the potential threats of the enemy. But the Naval Staff does not consider this a suitable moment to approach the Luftwaffe or the Führer with such demands, since the

Führer thinks the major attack on London may be decisive, and because a systematic and prolonged bombardment of London may result in the enemy adopting an attitude which will render SEALION superfluous. Hence the Naval Staff will not proceed with the demand."

This entry shows that even the Naval Staff did not remain uninfluenced by the current exaggerated hopes in high quarters regarding the effect of the intensified air war against England.

But when two days later an alarming report was received from the Naval Group West of successful attacks by the R.A.F., the Naval Staff changed its view. The report stated that interruptions caused by the enemy's air force, long range artillery, and light naval forces had for the first time assumed major significance. Anchorages at Ostend, Dunkirk, Calais and Boulogne could not be used as night anchorages for transports. Due to these restrictions further delays were anticipated. Losses or damage to transport vessels were not inconsiderable, though for the present they could be made good from reserves.

This report prompted the Naval Staff to enter the following in the war diary: "This report from the Naval Group West again shows that up to the present German air operations have in no way contributed to the relief of the situation as regards naval measures and preparations for SEALION. The air war is being conducted "as an absolute air war", without regard to the present

requirements of the Naval War, and outside the framework of operation SEALION. In its present form the air war cannot assist preparations for SEALION, which are predominantly in the hands of the Navy. In particular, one cannot discern any effort on the part of the Luftwaffe to engage the units of the British Fleet, which are now able to operate almost unmolested in the Channel, and this will prove extremely dangerous to the transportation. Thus the main safeguard against British Naval forces would have to be the minefields, which, as repeatedly explained to the Supreme Command, cannot be regarded as reliable protection for shipping.

The fact remains that up to now the intensified air war has not contributed towards the landing operation; hence for operational and military reasons the execution of the landing cannot yet be considered."

CHAPTER V

THE DAYS OF DECISION

63) There is no evidence in the records, neither can it be assumed, that the foregoing review led to a fresh request to the Supreme Command for a change in the operational objectives of the Luftwaffe. For, on the following day (11th September) information was received from the Supreme Command that the Führer had postponed the preliminary order for SEALION for three days, i.e. to the 14th September. According to the Naval Staff's notation the postponement "was due to absence of the requisite conditions for carrying out the operation (defeat of the enemy's air force, elimination of enemy bases near the operational area, weather conditions)," Thus the earliest D.Day became the 24th September.

64) On the 13th September the Führer, in a very hopeful appreciation of the effects of the German air offensive, stated that under the circumstances he had no thought of running the risk of SEALION. He was in agreement with the Commander-in-Chief of the Army that the operation could only be sponsored if the British defence had first been strongly subdued by the Luftwaffe. In the meantime the Commander-in-Chief of the Army, Field-Marshal v. Brauchitsch, had reached the conclusion, having regard to the compromise solution of the width of front ordered by the Führer, that the operation would promise

success only if the enemy had already been severely damaged.

Without any doubt the situation as it presented itself in the middle of September made the risk seem very great, involving actual possibility of failure.

65) There was no change in the appreciation of the Naval Staff regarding the preliminary decision which was due on the 14th September. The Commander-in-Chief of the Navy's personal comments on the situation on the 14th September were as follows:

- a) The present air situation does not provide conditions for carrying out the operation, as the risk is still too great.
- b) If the SEALION operation fails, this will mean great gain in prestige for the British; the powerful effect of our attacks will thus be annulled.
- c) Air attacks on England, particularly on London, must continue without interruption. If the weather is favourable an intensification of the attacks is to be aimed at, without regard to SEALION. The attacks may have a decisive outcome.
- d) SEALION, however, must not yet be cancelled, as the anxiety of the British must be kept up; if cancellation became known to the outside world, this would be a great relief to the British.

On the same day there was a meeting between the Führer, the Commander-in-Chief of the Navy and the Heads of the other two Services. The Führer considered it wrong to cancel SEALION so soon. The attacks by the Luftwaffe had already had considerable effect, though not as great as could be expected in good

weather. But the effect had not been sufficient to produce the air situation necessary for SEALION. Should the burden of the landing be added to continued air attacks, the total effect would be very considerable, for it was not one attack that was decisive, but the overall result. If SEALION were now abandoned, there would be relief among the British people, and the Luftwaffe's successes would be more easily borne by them.

The Commander-in-Chief of the Navy repeated his steadfast opinion that SEALION was the "ultima ratio", whose risk was very great. He recommended the intensification of air attacks, particularly on London, as these might win the war. He suggested awaiting the October dates for SEALION. A discussion took place on a question raised by the Luftwaffe whether the attacks on London, which up to now had by order been concentrated on important war plants, should in future be extended to other parts of the city with the object of increasing the moral effect. The Führer turned this down as he wished to keep systematic attacks on residential quarters as a last resort and as a reprisal for British terror attacks.

66) After the discussion the Führer decided on postponement of the preliminary date to the 17th September (D.Day 27th September).

In the Directive which was then issued by the Supreme Command it was again stated that air attacks on

London were to be continued over a wider target area with concentration on targets of importance to the war effort or vital to the city, including railway stations. "Terror attacks against purely residential areas are reserved for use as an ultimate means of pressure, and are therefore not to be employed at present."

67) On the night of 15th September British Bomber attacks on the coast from Boulogne to Antwerp caused considerable casualties to shipping in Antwerp. The main target of German air attacks continued to be London, and in addition, Southampton and Portland. Strong fighter and anti-aircraft defence resulted in high German losses.

On the following day the Naval Staff noted:

"The enemy's continuous fighter defence off the coast, his concentration of bombers on the SEALION embarkation ports, and his coastal reconnaissance activity indicate that he is now expecting an immediate landing. In the English south coast area many more patrol vessels were identified than on the previous day. On the night of 16th September strong enemy air attacks on the whole coastal area between Le Havre and Antwerp caused further shipping casualties."

The general impression was that the enemy's air force was by no means beaten, but on the contrary was showing increasing activity. Moreover, the continued bad weather had further delayed the preparation

of shipping and the minesweeping operations. The weather prospects offered no hope of a long period of anti-cyclone.

68) Under these circumstances the Führer decided on the 17th September to postpone SEALION indefinitely.

The situation regarding the enemy in the operational area was summed up by the Naval Staff on the 18th September as follows:

- i) The preparations for a landing on the Channel coast are extensively known to the enemy, who is increasingly taking counter measures. Symptoms are, for example, operational use of his aircraft for attacks and reconnaissance over the German operational harbours, frequent appearance of destroyers off the south coast of England, in the Straits of Dover, and on the Franco-Belgian coast, stationing of his patrol vessels off the north coast of France, Churchill's last speech, etc.
- ii) The main units of the Home Fleet are being held in readiness to repel the landing, though the majority of the units are still in western bases.
- iii) Already a large number of destroyers (over 30) has been located by air reconnaissance in the southern and south-eastern harbours.

- iv) All available information indicates that the enemy's naval forces are solely occupied with this theatre of operations.

As desired by the Führer, the decision of the 17th September was not to mean a final renouncement. He still kept open the possibility of a landing in October, but approved the request of the Naval Staff to disperse the shipping to prevent further losses, and to stop further assembly of the transport fleet, but this was to be done inconspicuously, so that the slowing up of the preparations should not be recognisable to the enemy. The High Commands of the Navy and Army then asked that the interval between the preliminary and executive orders should be increased to fifteen days, but the Führer was not yet able to make a decision on this point.

69) The need for extending the transport area had shown itself to be urgent. Of the total number of vessels that had been prepared for the operation the following had been either lost or damaged through enemy action by the 21st September:-

Of the 168 transports(700,000 G.R.T) - 21
lost or damaged (= 12.5%).

Of the 1697 barges - 214 lost or
damaged (= 12.6%)

Of the 360 tugs, - 5 lost or damaged
(= 1.4%).

Thanks to the careful planning of the Naval Staff, these losses could actually be replaced from reserves, but any further losses could not have

been dealt with in this way.

70) Although the Führer emphasised on the 17th September that the "indefinite postponement" ordered by him did not signify a final renouncement, yet the enlarging of the area for assembly of transports started the ball rolling towards cancellation.

At the end of September the Commander-in-Chief of the Navy suggested to the Führer, in view of the advanced time of year, that the 15th October should be the latest date for deciding on either complete abandonment, or postponement until the Spring of 1941. Following this proposal, the Army High Command pointed out that if the ten-day warning period were adhered to, it would not be possible to carry out the dispersal of the shipping sufficiently to reduce the air threat. The Führer then decided, on the 12th October, that until the Spring of 1941 preparations for a landing were to be maintained solely as a means of bringing political and military pressure on England. In the event of a fresh decision to land in the spring or early summer of 1941, the requisite degree of readiness would be ordered in good time.

"The military foundations for a later landing are to be improved in the interval.

Measures for dispersing the assembly points are to be so arranged that:

- a) The impression is maintained in England that we are preparing a landing over a wide area:
- b) At the same time German industry is relieved of the strain."

On the 9th January 1941 the Führer decided that preparations for SEALION were to be stopped in every sphere except the development of special equipment and the deception of the enemy.

CHAPTER VI

SUMMARY AND CONCLUDING REMARKS

(Figures in brackets refer to paragraph numbers in the preceding chapters.)

As can be seen in Chapter I, the possibility of invading England was first considered by the Germans in the late autumn of 1939. The problem was at that time studied only within the German Naval Staff (1), and was not put to the Führer by the Commander-in-Chief of the Navy until 31st May 1940 (2), at a time when the impending collapse of French resistance foreshadowed a German occupation of the Franco-Belgian channel coast. At this first discussion and also at a second discussion on the 20th June, the Führer rejected the idea. He regarded the execution as impossible. The Commander-in-Chief of the Army held the same opinion. It is important to establish also that the Commander-in-Chief of the Navy, when talking to the Führer, neither suggested nor sponsored the invasion, since he too considered the risks involved to be very large. His main purpose was to raise the whole question with the Führer in good time, so that the Navy should not be confronted by insoluble tasks, should the Supreme Command precipitately issue a sudden order to start extensive preparations. At a later occasion - on the 11th July - the Commander-in-Chief of the Navy told the Führer that he regarded the invasion only as a last resort, in order to make England ready to

sue for peace. He confidently hoped that England's resistance could be eliminated by interrupting her supplies from overseas and by an intensified air offensive, but without having to invade (6).

In the last days of June a surprising change of view occurred in the Führer's headquarters. In a Supreme Command Directive dated 2nd July, the three Services were instructed to initiate preparations for an invasion of England, the achievement of air supremacy being stipulated as an indispensable condition for the operation. It was added that for the time being it was a case of theoretical preparation for a possible eventuality (3).

The preliminary order of the 2nd July was soon followed by a second Supreme Command Directive dated 16th July, stating that the Führer had decided on "preparations and eventual execution" of the landing, which was to take place over a wide area, "approximately between Ramsgate and west of the Isle of Wight." Because of the advanced time of year, it was stipulated that the preparations must be completed by the middle of August (10).

In a discussion on the 17th July between the Commander-in-Chief of the Navy and the Commander-in-Chief of the Army, the latter considered that, as October would be characterised by fog, the latest possible date for the operation would have to be the middle of September, and that he would require one

month to complete it. The Army High Command, contrary to its previous attitude, now appeared to regard the undertaking as relatively easy, and thence the Commander-in-Chief of the Navy felt it necessary to draw the attention of the Commander-in-Chief of the Army to the great risks that were associated with the undertaking and to the possibility of losing the whole of the operational armies involved (12 and 22).

On the 19th July the Naval Staff produced a detailed appreciation, which contained the conclusion that the execution of the invasion "presented varied and exceptional difficulties, whose assessment required a detailed study of the transport problem" (13 - 19).

The attitude of the Führer at this time towards the planned operation was expressed at a discussion on the 21st July with the Heads of the three Services (20). He emphasised that the main difficulties lay in the field of supplies. 40 divisions would be needed. In view of the weather conditions the operation would have to be completed by the 15th September. If the preparations could not be completed by the beginning of September, other plans would have to be considered.

Already on the next day (22nd July) the Naval Staff reported to the Führer that the preparations could not possibly be completed by the middle of August (23).

In the meantime the detailed requirements of the Army had become available. They specified a minimum of 13 divisions as essential for the crossing; these data

allowed the transport problem to be worked out (24), and the military requirements of the Army High Command to be appreciated (25 and 22). As a result the Naval Staff realized on 30th July that, because of the variety and extent of the necessary naval preparations the operation could not possibly begin before the 15th September; that is, at a date when, according to the Führer's view, it should already have been completed (26). In a memorandum of the same date the Naval Staff concluded that it would not be advisable to carry out the operation in the current year, but that preparations should continue in case the "unrestricted air war in conjunction with the Naval measures had not yet resulted in making the enemy ready to negotiate." (27).

It was in this sense that the Commander-in-Chief of the Navy reported to the Führer on the 31st July, and specifically rejected the demand of the Army High Command for a crossing on a wide front. He considered that the crossing could only be successful if the operation were limited to "a narrow sector in the area of the Dover Straits." The Führer fully appreciated the difficulties enumerated by the Commander-in-Chief of the Navy, and approved the 15th September as the earliest D.Day. He reserved a decision as to whether to launch the operation, he would first have to await the results of the projected intensified air war. (28-29)

The question of the width of the invasion front, first raised at this meeting with the Führer, played

a decisive part in subsequent operational preparations, and involved the Naval Staff and the General Staff in serious differences of opinion. The General Staff regarded a landing on a broad front (Ramsgate - Lyme Bay) as an essential condition for operational success on British territory; the Naval Staff could only guarantee the safe crossing of the Channel if it were confined to a narrow area in the Straits (Beachy Head - Deal). A discussion between the two Chiefs of Staff on the 7th September produced no agreement. It is true that on this occasion the Chief of the General Staff, waiving his grave scruples, gave up the Lyme Bay project, but demanded at least the landing of powerful Army forces in the Brighton area. The Naval Staff thought that this proposal also would have to be refused. (32). Although each side recognised the view of the other as justified, both considered any deviation from their respective well-founded points of view as inadmissible.

Indeed, in further negotiations, at which the Naval Staff, acting on a mediation proposal from the Supreme Command, declared its readiness to go some way towards meeting the Army High Command's request for a landing at Brighton, no agreement could be reached, as the Army High Command persisted in its wish to land "a whole Army at Brighton (34-39). This discrepancy had therefore to be finally cleared up by a decision of the Führer on the 27th August, which directed that the Army operations must fit in with the facts in relation to the available

shipping space and security of the crossing and of the disembarkation" (40).

The Führer's decision, which cleared up the 'width of front' controversy, made it possible to proceed with the selection of landing places. This was governed by the characteristics of the coast and the operational possibilities presented to the Army Command in the Coastal sector, once the landing had taken place. Four landing sectors were established: "B" - west of Folkestone to Dungeness: "C" - Dungeness to Cliff's End "D" - Bexhill to Beachy Head: "E" - Brighton to Selsey Bill (41). In a memorandum of the 10th August to the Supreme Command, the General Staff gave its appreciation of the enemy position, based on the conditions of terrain and on intelligence received from England. From the military point of view the most favourable conditions were considered to exist on the left wing at Brighton, where the terrain also favoured the employment of high speed units. It was hoped that flanking attacks could be launched from this region. The General Staff indicated its first operational objective as the attainment of the line Southampton - Mouth of the Thames (42).

In order to disperse the enemy's defence forces, the Naval Staff planned a feint operation in the northern part of the North Sea, to be carried out as conspicuously as possible, to simulate a landing in Scotland; and also, by means of operations by the cruiser "Hipper" and the pocket battleship "Scheer" in the Iceland-Faroes region and in the North Atlantic,

to draw off the enemy's naval forces to this area (45).

Of the essential material preparations the greatest, and the most exacting in time, was the requisitioning, adaptation and assembly of the shipping space needed for the Channel crossing. By mid-July the Naval Staff calculated the total requirement as 155 transport steamers (700,000 G.R.T.), 1722 barges, 471 sea-going tugs and 1161 motor boats (46). It is confirmed that despite the particularly unfavourable weather in mid-summer 1940, and in spite of interruptions and losses through enemy action, the Naval Staff succeeded in assembling the entire fleet of transports, fully ready for use, by the middle of September (47, 48). Performance of the necessary mine-sweeping operations in the Channel area was most unfavourably affected by the weather conditions and also by enemy activity. Under these circumstances the Naval Staff doubted whether it would be possible to obtain a precise picture of the mine situation in the immediate vicinity of the enemy coast (49).

The location of the tactical minefields in the crossing area, for protection of the flanks, was decided, and the necessary mining material was got ready in good time (50). As a further protection a large number of U-boats were allocated positions, from which they were to proceed against enemy naval forces (51).

Advance units and naval landing parties were formed for the first landing; the question as to who was to give the orders, always difficult in combined operations, was settled by vesting the command in the Naval Commander for the period of the crossing up to the moment of landing the troops (52).

The construction of heavy coastal batteries on the French Channel coast proceeded rapidly, and was completed by the middle of September (53).

From the beginning the leading authorities of the Supreme Command were unanimous that the principal condition for a successful crossing was the prior achievement of air supremacy in the area concerned. At his very first talk with the Führer - on the 25th May - the Commander-in-Chief of the Navy had given this as an indispensable condition (54). Thus it might have been expected that the Luftwaffe, when starting its intensified air war in the middle of August, would operate fully and completely in the service of SEALION; that is, would direct its attacks exclusively or at least principally against those targets whose elimination would help prepare for the main operation. This, however, was by no means the case (55-59). From the very start the Commander-in-Chief of the Luftwaffe displayed no marked interest in the enterprise; he pursued other aims. He confidently hoped that an energetic air offensive alone would cause the enemy to sue for peace (61). At this time the effect of the air attacks was generally over-estimated in Germany,

and the Naval Staff, including the Commander-in-Chief of the Navy, allowed themselves to be influenced for the time being by these exaggerated hopes. The interruptions and losses already caused by the enemy's air activity during the preparatory period led the Naval Staff rightly to appreciate that the Luftwaffe's objectives were not fitting in with SEALION, and to make remonstrances to the Supreme Command; yet there was essentially a lack of drive in petitioning the Führer to change the situation (62). The Luftwaffe was now discovering that the enemy's resistance to their own activity was stronger and tougher, and was causing greater German losses than anticipated. Nevertheless the morale in the Luftwaffe remained confident (59). And yet, when in mid-September the time had come for a decision whether to proceed with SEALION, the requisite degree of air supremacy had not been attained, nor - if the facts were faced - were there any sure indications that the "absolute" air war would achieve its objects within measurable time (60).

D.Day, which had originally been fixed for the 15th September, was in the meantime postponed to 21st September at the request of the Naval Staff, as the enemy's counter-activity and the unfavourable weather had caused some delays in carrying out the preparations (57). With the 21st September as D.Day, the preliminary order for the operation had to be issued on the 11th September, since ten days were needed for the final preparatory measures, such as the laying of tactical minefields and

the disposition of U-boats.

On the 11th September the Führer decided to postpone the preliminary order for three days, to the 14th September, "having regard to the fact that the essential conditions for carrying out the operation do not yet exist", especially "the defeat of the enemy's air force" (63). At the discussion on the 14th September between the Führer and the Chiefs of the three Services, the Commander-in-Chief of the Navy recommended increased air attacks, particularly on London, as "these attacks could be decisive for the outcome of the war". He suggested waiting until the October dates for SEALION. (65). After the discussion the Führer ordered the postponement of the preliminary order until the 17th September (61). By this date the situation had not changed, and he then decided to postpone SEALION "indefinitely". (68).

Thus in effect a negative decision was reached. This was followed on the 12th October by the Führer's Directive to maintain preparations until the Spring "purely as a means of political and military pressure on the English", and then - on the 9th January 1941, - by the order to discontinue preparations for SEALION (70).

CONCLUSIONS

In the course of a conversation at table at the Führer's Headquarters in 1943 the latter stated that he much regretted "having allowed himself to be talked out of SEALION by the Navy in the Autumn of 1940". This staccato phrase was by no means warranted by the facts, and yet it contained a measure of truth. As the Naval Staff, in its preliminary operational work and in the course of the preparations, probed deeper into the problem, so progressively confidence and faith in success receded. In all spheres of war-leadership the Commander-in-Chief preserved independence of judgment in relation to his Staff, and he certainly did not in every case follow the opinion of his collaborators; but he agreed with the appreciations and the intentions of the Naval Staff in all matters relating to the planning and execution of SEALION. It can also be seen from the archives that during the preparation of this operation he kept the Führer informed of details concerning the views and requirements of the Naval Staff, as set down in memoranda and proposals to the Supreme Command. Indeed, this was entirely necessary, as the Führer, having regard to his own background, was unfamiliar with the peculiarities of this amphibious undertaking; and it was all the more necessary, since Grand-Admiral Raeder, in his capacity as Commander-in-Chief of the Navy, bore the general responsibility for success. In a conversation that the author had in 1944 with the Grand-Admiral, the latter assumed credit in particular

for having enlightened the Führer - who originally regarded the crossing of the channel as a mere "extended river crossing" - as to the true character of the operation. In view of the great risks, it goes without saying that, when discussing the question with the Führer, the Commander-in-Chief of the Navy most strongly emphasized the difficulties that would have to be overcome. From this the Führer will have concluded that the Naval Staff was basically antagonistic to the undertaking, although the Grand Admiral did adopt a positive attitude, as long as certain conditions could be fulfilled.

This explains the Führer's subsequent but unjustified impression that it was the Navy who had talked him out of SEALION.

Those who tend to draw the conclusion that the operation was abandoned because of the German Air Force's failure to achieve effective air supremacy come nearer to historical truth, but even this does not fully meet the case. The real cause lay deeper. Among the prerequisites for the operation, one remained unspoken, though it could be read between the lines in all the discussions, and that was: Command of the Sea, for lack of which Napoleon's invasion plans came to nothing in 1805; neither could this condition be created in 1940, having regard to the existing relative strengths. It was believed that the lack of sea power could be replaced by air power, or, put in

another way, that our own air power would be able to eliminate the enemy's sea power. For this operation that was impossible. In fact even if, helped by luck, the Invasion Army had been landed intact and without excessive losses, the main difficulty would only then have begun, namely, the uninterrupted supplying of the invasion army in the face of an opponent who on his own territory must have become stronger from day to day. In the face of an all-powerful sea opponent - resolute and prepared for great sacrifices - it could not be assumed that the Luftwaffe alone - largely dependent on the weather - would succeed in permanently preventing the enemy's naval forces from disorganising supplies.

When the time arrived for making a final decision, not one of the responsible authorities was ready to speak decisively against the operation, although all recognised the inherently serious objections; but all were privately relieved when the failure of air supremacy afforded a good reason for outwardly justifying the abandonment of the operation. The cancellation was materially facilitated by the fact that the Supreme Command at that time regarded the general military situation as particularly favourable.

Just then hopes were at their height of winning the war through the combined effect of attacks on shipping and air attacks on industry.

Hence there seemed no necessity to embark on this extreme measure involving such great risks, since a failure would mean a serious disaster for us, while greatly increasing the enemy's prestige in the eyes of the world.

+ + + + + + + + + + +

APPENDIX

Organisation of German Naval Forces Intended
for Operation "SEALION"
(excluding U-boats)

Naval Group Commander West

Naval Commander West

Subordinate to him:

- 1) S.O. Destroyers
Two Destroyer Flotillas (Nos. 5 and 6).
- 2) S.O. Torpedo Boats
Four Torpedo Boat Flotillas (Nos. 1, 2, 5, and 6)
Four Motor Torpedo Boat Flotillas (Nos. 1, 2, 3,
and 4).
- 3) S.O. Minesweepers
Thirteen Minesweeping Flotillas
(Nos. 1, 2, 3, 4, 12, 14, 15, 16, 18,
32, 34, 38, 40).
Five Motor Minesweeping Flotillas (Nos. 1, 2, 3,
and 4).
Fourteen Minelayers.
Several Groups of "Sperrbrecher" (Vessels fitted
with magnetic minesweeping
equipment and mine clearance
vessels for forcing barrages).
- 4) S.O. Patrol Flotillas
Nine Patrol Flotillas (Nos. 2, 3, 4, 7, 13, 15, 17,
18, 20).
One Anti-Submarine Flotilla (No. 12).

Note: The organisation as given above was in force
at 24.8.41.

The numerical strength of the above-mentioned
Flotillas cannot be precisely stated; it
fluctuated with losses and temporary damage
incurred. The average strength can be given
as follows:-

(Number of Boats in each Flotilla)

| | | |
|----|----------------------------------|----------|
| a) | Destroyer Flotilla..... | 5 |
| b) | Torpedo Boat Flotilla..... | 5 |
| c) | Motor Torpedo Boat Flotilla..... | 10 to 11 |
| d) | Minesweeper Flotilla..... | 8 |
| e) | Motor Minesweeper Flotilla..... | 8 |
| f) | Anti-Submarine Flotilla..... | 8 to 10 |

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