

Intelligence on German appreciations and preparations from February 1944 to D-Day

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CHAPTER 44

Intelligence on German Appreciations and Preparations from February 1944 to D-Day

IN ADDITION to raising the strength of the initial assault and the rate of build-up to provide a safer margin of superiority over the expected scale of enemy opposition, the Initial Joint Plan had allowed for exceptionally heavy losses, particularly in landing craft, and had done all that was practicable to increase the naval and air support. In the knowledge that the enemy had fortified the coast to an unprecedented extent, the detailed force-plans had taken account of the hydrographic and topographic conditions in the landing areas, including such details as the gradients, the exits and the weight-bearing qualities of every beach, and of a mass of intelligence about the location and arc of fire of the active defences, from the heaviest batteries to machine-gun nests, and the nature and location of the extensive minefields behind the beaches. They had sought, indeed, to produce 'the perfect plan' for each sector of the assault – one which in the light of long study of a fifty-mile stretch of coast settled in advance where, and with what air support, every Allied assault craft would land and every ship in the bombarding force would take up station.¹

Once completed, such plans would be reconsidered only if intelligence called for revised estimates of the form and scale of the enemy's resistance. But they had been drawn up so far in advance that for many weeks the Allies could not exclude the possibility that, either because it was becoming apparent that the enemy had discerned the size and destination of the landings, or was for other reasons altering his plans for countering them, *Overlord* would have to be re-fashioned, or even postponed or abandoned.

In the event no further serious revision was made; the Initial Joint Plan was 'substantially that which was put into operation', and few changes were made to force-plans.² That this was so was

1. ADM 223/287, SO(I) to ANCXF, 'Notes on Round-up and Overlord', pp 7, 16.

2. CAB 44/242, *Operation 'Overlord'*, p 71.

due in the first instance to the fact that, as we shall see, order of battle intelligence showed that the Allied estimate of the scale of opposition to the landings continued to be reasonably accurate. But that estimate had rested on the supposition that the landings would gain surprise; and it was no less important that the Allies succeeded in keeping secret throughout those weeks the time, the destination and the scale of the assault. In view of the scope of their preparations and the number of people involved in them, this was to say the least a considerable achievement, and one which down to the final days of waiting and D-day itself, when only the poor weather still concealed their design, rested on various efforts and precautions.

The Initial Joint Plan, like COSSAC's outline plan, regarded surprise as a pre-requisite for the success of *Overlord*; it repeated COSSAC's requirement that in the preliminary air offensive and in all reconnaissance operations targets should be covered along the whole length of the Belgian and French coasts, notably in the Pas de Calais and in Normandy but with at least two sorties in the Pas de Calais for every one in Normandy. Over and above the security precautions that were in any case in force in Whitehall and throughout the country, additional precautions, some of them severe and controversial, were introduced in the spring of 1944, the opposition of the Prime Minister and the civil departments being overcome by urgings from SHAEF and MI 5.* SHAEF insisted that *Overlord* would have small chance of success if the enemy obtained so much as 48 hours' notice of the plans and that a longer period of notice would spell 'certain defeat'. MI 5 argued that although there was as yet 'no single uncontrolled agent in the UK', the Germans might introduce 'a large influx' of new agents, some of which might escape detection.⁴

Neither these measures nor the Allied deception plan, to which we will come, would have sufficed to keep the enemy guessing if he had been blessed with reasonably good intelligence. Far from

* In February a ban was imposed on Press speculation about the second front. From 1 April all unauthorised travel to and from a coastal zone from The Wash to Land's End and an area around the Firth of Forth was forbidden, other communications to and from those areas were considerably restricted and travel to and from Ireland was suspended. On 6 April all normal leave was stopped for British forces in the United Kingdom, and limits were placed on the movements of Allied troops there. As for communications between Britain and overseas, it was decided on 16 April to ban all travel to and from the United Kingdom by Allied and neutral diplomats (other than those of the Dominions, the US and the USSR), to prohibit the receipt or despatch of all messages, and to forbid the use of cyphers.³

3. Hinsley and Simkins, *Security and Counter-Intelligence*, (forthcoming); Ehrman, *Grand Strategy*, Vol V (1956), pp 316–317; Cruickshank, *Deception in World War II* (1979), pp 172–175.
4. Hinsley and Simkins, op cit.

having good intelligence, however, Germany in the weeks before D-day lacked any source of reliable information. All German agents in the United Kingdom were controlled by the British; and while the reports that the Germans received from uncontrolled agents in Lisbon, Stockholm and other capitals were occasionally uncomfortably close to the mark, their accurate reports were but a few among many that were wildly inaccurate.* There is no evidence that the Germans derived any benefit from such breaches of security as were suspected at the time.† So complete was the Allied control of the air, and also Germany's lack of adequate aircraft, that the GAF was virtually unable to carry out overland reconnaissance in southern England; it succeeded in obtaining some coverage of shipping off the south coast, but its offshore operations were also insufficiently regular to provide the basis for good reconnaissance.^{9‡} Above all, the Allies had good reasons for

* Two trusted German agents, one in Lisbon and one in Stockholm, who were outside the Double-Cross net caused anxiety. Both were judged to be frauds in the sense that they had no genuine sources of information in the United Kingdom (although there was a residue of doubt regarding the Stockholm agent), but it was feared that they might nevertheless hit on the truth and be believed.⁵ In the event they did no damage to *Overlord*, though at the last minute the Lisbon agent reported that the Cherbourg peninsula was the target (see below, p 61).

Between November 1943 and February 1944 there was a major penetration of the British embassy in Ankara – the *Cicero* case. A considerable amount of material, some of which dealt with the Allied attempt to bring Turkey into the war and was highly classified, was photographed by the Ambassador's valet and transmitted to Berlin. The existence of a leak from the embassy became known to the Allies in January 1944, but neither investigation in the embassy nor such diplomatic and Sicherheitsdienst traffic from Ankara as was decrypted disclosed the source, which was not identified until after the war. The mythology of the case has greatly exaggerated the damage which was done. The Allied aim to draw Turkey into the war was widely known and it is unlikely that the leakage had more than a marginal influence on the course of events. The compromised material did not reveal the plans for *Overlord* as has often been claimed. There were passing references to *Overlord* in the documents, but they cannot have done more than indicate to the Germans that this was the code-name for an Allied amphibious operation in the west, probably the major invasion. After very full investigation the heads of the SIS and MI 5 agreed that the Allies had escaped the 'appalling national disaster' which might have accrued from the enemy's penetration of a key embassy.⁶

† Several possible cases were reported from March and brought to the attention of the Prime Minister. But the anxiety they caused proved to be exaggerated, few being of more than local significance though, just before D-day, anxiety was revived by a Columbia Radio broadcast.⁷ This last incident was referred to in letters between 21st Army Group and SHAEF on 4 and 5 June.⁸ For other examples see Haswell, *The Intelligence and Deception of the D-day Landings* (1979), pp 155, 157, 159; and Roskill, *The War at Sea*, Vol III Part 2, (1961) p 38.

‡ Not more than 32 overland reconnaissance flights by the GAF were recorded in daytime in the first six months of 1944, and by no means all of those were over southern England. Flights in that area were recorded on only two days in January; there were none in February

5. *ibid.*

6. *ibid.*

7. *ibid.*

8. WO 219/5104.

9. AIR 41/23, *The Liberation of North-West Europe*, Vol III, p 35.

being confident that the Germans were decrypting no Allied signals.* In all these directions, moreover, they enjoyed the double advantage of knowing not only that the enemy was poorly served but also that their own intelligence was so comprehensive and so prompt that it was unlikely that any substantial change in German appreciations and dispositions would escape their attention.

That the Allies could rely on intelligence at least to this extent was due to the fact that PR, agents and reports from the Resistance – the non-Sigint sources whose contribution to knowledge of Germany's defences and order of battle continued to increase† – were being supplemented more and more by Sigint. Benefiting from the expansion of Sigint resources and from the fact that, though still on a limited scale, the GAF and the German Army were at last using wireless in western Europe, GC and CS and the Y services were now making sufficient progress against the enemy's communications in that theatre to ensure that, if he did take steps or make changes that had not been allowed for, they would get some evidence about them. In particular, most of the new Enigma keys of the German Air Force were broken soon after they were introduced, from February 1944, and although little progress was made against the new Army keys that were identified, the Fish link between C-in-C West and Berlin was broken in March. As had long been the case, moreover, the naval Enigma keys in the west were being read without interruption.‡



In addition to giving the Allies some assurance that, should any occur, untoward changes in German expectations and preparations would not go undetected, these Sigint developments enabled them to undertake a deception programme which had reasonable

and March. Between 26 April and 9 May the Germans increased their reconnaissance effort. SHAEF's intelligence summary for the week ending 3 May noted that there had been daily reconnaissance of the western Channel with landfall over the coast in the Plymouth–Dartmouth and Sidmouth–Southampton areas, and possibly brief coverage over Eastbourne and Dover. Its summary for 10 May reported that the sorties had slightly decreased and that overland coverage was thought to have been obtained only at high levels in the Falmouth and Dover areas. The only recorded overland flight in daylight in the first week of June was over Margate on 7 June. The number of successful flights over coastal waters was obviously larger, but it was clear that they were much less frequent over the Channel than over Scotland and the Orkneys and Shetlands – not least because from mid-April to D-day ADGB maintained daily standing Spitfire patrols far out into the Channel along the whole of the south coast.¹⁰

* See Volume II, Appendix 1.

† See above, pp 16, 28.

‡ See Appendix 6(i).

10. AIR 41/49, *The Air Defence of Great Britain*, Vol V, p 88; WO 219/1919, SHAEF Weekly Intelligence Summaries, Nos 7 and 8 of 6 and 13 May 1944.

prospects of prolonging the enemy's uncertainty about Allied intentions. Such a programme would have been impracticable if Sigint had not provided detailed information about Germany's measures and frequent confirmation that her own intelligence was in a poor state, and this was recognised in January 1944 when, as part of the Allied preparations for *Overlord*, arrangements were made for the deception authorities to receive from GC and CS without delay all decrypts that might have a bearing on their work.

At the Tehran conference the Combined Chiefs of Staff ordered that a general strategic deception plan should be drawn up for 1944 and the Russians agreed that a Russian deception scheme including a simulated attack on northern Finland should be concerted with this plan; the Russians accepted detailed proposals two months later.¹¹ Designed to draw the attention of the Germans away from *Overlord* altogether, and also from *Anvil*, the Anglo-US plan (code-name *Bodyguard*) was put into force in January 1944. Its object was to impress the Germans with three arguments. The Allies would need 50 divisions for a cross-Channel invasion, and because of the difficulty of assembling and training so large a force and providing adequate landing craft, the invasion would not take place till late in the summer, if then. In view of this delay, the Allies would, secondly, direct their main effort against the Balkans, though there would also be landings on both sides of Italy and, in the spring, an attack on northern Norway in conjunction with the Russians, who would not launch their main offensive before the end of June. Thirdly, the Allies hoped that strategic bombing would meanwhile bring about Germany's collapse; the priority they were giving to bringing to England from America the ground personnel and other resources demanded by the Allied air offensive was one reason why they were encountering difficulties in mounting the invasion.¹² In choosing to emphasise these themes the deception authorities were without doubt guided by the decrypt of a telegram from the Japanese Ambassador in Berlin early in November 1943. This had reported that while the withdrawal of Allied landing craft from the Mediterranean was leading the Germans to believe that the next major landing would be in France, not Italy or the Balkans, they still had some doubt as to whether the Allies would embark on 'so hazardous a venture' as a cross-Channel invasion, for which they would require 50 divisions.

By January 1944, however, the hope that the Germans could be influenced by deception measures based on such arguments had

11. Howard, *Strategic Deception* (forthcoming), Chapter 6.

12. *ibid.*

been undermined. The evidence about their defence preparations and the increase of the strength of their Army in France had put it beyond doubt that they expected the main effort of the western Allies in 1944 to be a cross-Channel invasion; and this evidence had been reinforced by decrypts disclosing their response to General Eisenhower's appointment as Supreme Allied Commander and their decision to appoint Rommel to a command in the west. In an appreciation decrypted at the end of December 1943 OKH's intelligence branch (*Fremde Heere West – Foreign Armies West*) had taken the news of Eisenhower's appointment to be proof of 'the manifest decision of the enemy command to concentrate the main effort in the England area'; operations made in the Mediterranean to coincide with the large-scale attack from England would aim at tying down German troops rather than at forcing strategic decisions.¹³ A few days later, when Whitehall had already heard the rumour that Rommel was to replace von Rundstedt as C-in-C West, the decrypt of a signal sent by the Japanese Military Attaché in Vichy on 13 December disclosed that Rommel was to command under C-in-C West 'all forces held in reserve for the counter-offensive', and that a further four divisions were to be allotted to him. This signal added that a single armoured HQ of Army Group strength was also being set up under the C-in-C, and that a force composed of 9 infantry brigades, 6 mechanised brigades and other units was being assembled under Hitler's direct control in Germany.^{14*} A further message from the Attaché at the end of February, decrypted at the end of March, named Rommel's command – Army Group B – and stated that it controlled the offensive forces in the Netherlands Command and in Fifteenth and Seventeenth Armies.^{16†}

Before the end of December further decrypts had emphasised the need to complement the *Bodyguard* plan with deception measures specifically designed to deflect German attention from Normandy to other western sectors. On 16 December the decrypt of an appreciation by C-in-C West, dated 14 December, had

* Rommel was appointed C-in-C Army Group B on 31 December 1943. At that time OKW intended to reinforce the west by the transfer of some 7 divisions and other units from Norway, Denmark, Italy and the Balkans in readiness for invasion, but in March it decided that C-in-C West would not receive emergency reinforcements until the Allied landing intentions had been clearly established.¹⁵

† For subsequent intelligence on the armoured Army Group HQ and Army Group B see below, pp 66–68.

13. WO 208/3573 MI 14 Weekly Summary for the CIGS, 6 January 1944; CX/MSS/T50/43.
14. JMA 3867; WO 219/1937, Martian Report No 75 of 21 December 1943.
15. Harrison, *Cross-Channel Attack* (Washington DC 1951), pp 231–233.
16. AWL 1702 of 21 March 1944.

disclosed that German Y was continually detecting landing exercises in the Portsmouth–Plymouth area.¹⁷ On the same day this salutary warning against W/T activity which might well focus the enemy's attention on Normandy and Brittany was reinforced by the decrypt of a telegram from the Japanese Ambassador in Berlin reporting on a recent interview with Ribbentrop. Ribbentrop had said that there was little doubt that the Allies had agreed that a second front in the west should coincide with a big Russian offensive; the Germans were uncertain where the landings would be, but Belgium and the narrows between England and France seemed the most likely area. The Ambassador had suggested that in view of the difficulty of landing in that area the western Allies might well fulfil their promise to the USSR by opening their attack in the Normandy peninsula or Brittany, allowing a decision about the main landing in the narrows to depend on the progress of their preliminary operations. Ribbentrop had agreed that this was quite possible, adding in a reference to the V-weapons that Germany had plans not only for crushing any invasion but also for destroying England. At the end of December, as MI 14 noted on 6 January, an appreciation from OKM was decrypted; it associated concentrations of shipping in the Scottish anchorages and the Bristol Channel with 'the great landing planned against western Europe' and assumed on the part of the Allies 'a high degree of readiness'.¹⁸

In January 1944, in the wake of this intelligence, SHAEF's deception staff began to draw up in conjunction with the London Controlling Section and MI 5 a more elaborate version of the original COSSAC plan for concentrating German attention on the Pas de Calais.* The new plan (code-name *Fortitude*) was approved on 23 February. Simulating a threat both to Scandinavia and to the Pas de Calais, it was also divided into two chronological parts. Up to D-day the aim was to persuade the Germans that the main invasion across the Channel would take place only after attacks had been made in Norway in conjunction with the Russians; it was being prepared so as to enable the Allies to take advantage of any weakening of Germany that might result from these attacks and

* The original deception plan for *Overlord* was drafted by COSSAC's staff in September 1943 and provisionally approved by the Chiefs of Staff in November. It sought to divert the enemy's attention from the Caen sector, and to pin down his forces before and after the landings, by simulating a threat against the Pas de Calais, visual deception (dummies), W/T deception and double agents being used to indicate the assembly of a force of six divisions in eastern and south-eastern England and 'discrete display' in that area being accompanied by total concealment of the actual preparations that were being made in the Southern and Western Commands.

17. Dir/C Archive, 5183 of 16 December 1943; CX/MSS/T33/79.

18. WO 208/3573 of 6 January 1944.

from strategic bombing. After D-day the real landings in Normandy would be portrayed as being only a feint to draw off German reserves while the main attack was launched with six assault divisions against the Pas de Calais with the object of consolidating a bridgehead with 50 divisions ultimately embracing Antwerp and Brussels. When this other assault had been made, shipping would be available for operations against Norway.¹⁹ In the Mediterranean the deception measures continued to conform to plan *Zeppelin*, a part of Operation *Bodyguard*. This sought to exaggerate the amount of Allied assault shipping in the Mediterranean and to convince the Germans that, although the Allies were considering a landing in the south of France, they might not carry it out because of their larger intentions in the Balkans.^{20*}

The feasibility of *Fortitude* rested heavily on the knowledge that, as was obvious from the priority given to the defences there, and as was to be confirmed by Sigint, the Germans were convinced that the Pas de Calais was the most likely invasion area. They were so on grounds of inherent strategic probability,[†] and also in the belief that the Allies must invade there in order to eliminate the V-weapons bases for which they were showing so much concern and in which Germany was investing so much hope. Had it been otherwise, no amount of deception would have tied their attention to the Pas de Calais; and as deception succeeds in proportion as it ministers to expectations, we may suppose that, had it been otherwise, the deception programme would have been different. As it was, however, the German fixation on the Pas de Calais was increasingly moderated as D-day approached by another German conviction – the belief that the strength of the Allied forces in the United Kingdom was far greater than was in fact the case.

The Allied deception authorities had been using false W/T and double agents since 1942 to give the Germans an inflated picture of Allied military strength in the United Kingdom and the Mediterranean. From the beginning of 1944 they learned from Sigint that the Germans were themselves building up this picture by attaching particular significance to their identification of 1st US Army Group (FUSAG) in the United Kingdom. A decrypt of 10 January disclosed that FUSAG, 'not previously established by Traffic Analysis', was among the units they had identified in plain language signals, and that First US Army, 'last established on 1

* For further details of Operation *Zeppelin* see below, p 289 fn*.

† See above, p 12.

19. Howard, op cit, Chapter 6; CAB 44/242, p 186 et seq.

20. Howard, op cit, Chapters 5 and 7.

November in the United States', had also been identified.²¹ On 12 March and 29 April decrypts revealed that Foreign Armies West had heard that General Patton had arrived in England and was apparently commanding one or two Armies.²² On 14 May, in a signal decrypted on 20 May, the Japanese Military Attaché reported that the Germans had concluded that FUSAG had evolved out of First US Army and were associating it with Patton's 'return to Britain'.²³ We need not doubt that these decrypts inspired *Fortitude South*, the extension of *Fortitude* which the deception authorities prepared in April with the object of persuading the enemy that FUSAG was waiting in southern and south-eastern England to invade the Pas de Calais under Patton's command after the landings in Normandy.* And we shall see in due course that on D-day and for some time afterwards the Germans were severely impeded in the deployment of their armoured reserves by the fact that, as a result of their exaggerated estimates of the size of the invasion forces, and particularly of their fear of FUSAG, they could not exclude the threat of a follow-up invasion.† In the run-up to D-day, on the other hand, the more they reflected on the supposed vast scale of the armies available for invasion, the more they were disposed to believe that the Allies need not restrict the invasion to the Pas de Calais and might indeed land, either simultaneously or even initially, elsewhere.

These were the circumstances in which the Chiefs of Staff authorised the implementation of *Fortitude South*, which was formally brought into force on 18 May²⁴ at a time when, as we shall see, the Germans were exhibiting a disturbing propensity to conclude that the first and perhaps the main landings would be made in Normandy.



The decrypts which enabled the deception authorities to monitor changes of emphasis in Germany's expectations, and to

* FUSAG was eminently suitable for its fictional task. It was a formation which had actually set up a skeleton HQ in the UK in October 1943, when the intention was that it should assume command under SHAEF of the two – later three – American armies in France after the consolidation of the lodgement area. In the event this responsibility was allotted to 12th US Army Group.

† See Chapter 46.

- 21. CX/MSS/T75/29.
- 22. DEFE 3/152, VL 9732 of 29 March; DEFE 3/38, KV 773 of 12 April 1944.
- 23. BAY/KV 150 of 20 May.
- 24. CAB 44/242, p 189.

adjust the deception programme accordingly, were part of the steady increase in Sigint relating to western Europe which, coinciding with Germany's growing conviction that 1944 would bring the opening of the second front, took place from the beginning of that year.*

On 30 January a naval Enigma decrypt circulated an order of the day in which Hitler stated that the Anzio landings were the first step 'in the invasion of Europe planned for 1944'; while the mass of the invasion troops remained in readiness in England, the Allies would carry out such operations at as great a distance as possible from the main base with a view to tying down strong German forces and gaining experience.²⁵ The Japanese Ambassador telegraphed that in an interview on 22 January Hitler had said that the Allies could hardly abandon their plans to attack in the west, given the threat to the United Kingdom from his reprisal weapons, and had added that while invasion across the Channel was the most effective action the Allies could take, they might think it too hazardous and decide to land in the less heavily defended area around Bordeaux or even in Portugal.²⁶ When this telegram was decrypted, early in February, it had already emerged from naval decrypts of 29 January that, following a false GAF sighting of between 200 and 300 landing craft about 100 miles off the Gironde estuary, U-boats from as far away as Rockall had been ordered to proceed to Biscay at full speed, regardless of the danger from Allied aircraft and mines.²⁷ Later in February Sigint showed the Navy and the GAF carrying out elaborate anti-invasion exercises between the Gironde and the Spanish frontier, and also over the Loire estuary and the Brest and Cherbourg peninsulas.²⁸

A naval Enigma decrypt of 27 February emphasised the vulnerability of the south coast of France to Allied invasion.²⁹ According to the decrypt of a telegram from the Japanese Ambassador in Vichy the Germans remained anxious as to that area in the first week of March; they suspected that in view of the set-backs the Allies had encountered in Italy, they might risk a large-scale landing there in the near future.³⁰ On 21 March the

* The increase was not confined to German sources. Such was their number and importance that from 30 March the Japanese diplomatic decrypts were included in a separate series of signals, the BAY series, among the intelligence transmitted from GC to CS to the Overlord and Mediterranean Commands.

- 25. DEFE 3/134, VL 5160 of 30 January.
- 26. AWLs 1472 and 1494 of 8 and 11 February.
- 27. ADM 223/171, OIC SI 842 of 30 January.
- 28. Air Sunset 146 of 19 February; AWL 1535 of 19 February; ADM 223/318, Coastal Defence Report No 4 of 5 March.
- 29. DEFE 3/143, VL 7247 of 27 February.
- 30. AWL 1626 of 7 March.

decrypt of a signal sent by the Japanese Military Attaché in Vichy at the end of February reported that the Germans were sending four infantry divisions and two armoured divisions to Avignon, Montpellier, Toulouse and Bordeaux.³¹ On 1 April, in a signal reporting on his recent tour of the defences in the area which was decrypted on 4 April, the Attaché added that of the two corps defending the coast east and west of Marseilles with three divisions each, the western one was being strengthened by a fourth division in the belief that the Allied attack was most likely to come between Narbonne and Sète.^{32*}

By the time these decrypts were obtained the Allies had agreed, on 21 March, that Operation *Anvil* should not be timed to coincide with Operation *Overlord*.† They had also received by then intelligence indicating at least for the present that the Germans had come to the conclusion that the attack in the south of France would be concerted with the larger invasion, and that the larger invasion was not imminent. The decrypt in the middle of February of a circular telegram sent by the German Foreign Ministry had revealed that the Abwehr had learned in Stockholm that the second front had been postponed till June, partly on account of disagreements between the Allied Expeditionary Air Force and the British and US strategic bomber forces.³⁶ In a telegram decrypted on 23 February the Japanese Minister in Berne had quoted a German intelligence authority as saying that the main invasion was not expected in March and that the preparations for a secondary landing in the south of France by the Americans from Corsica would take between two and four months to complete.³⁷ On 29 February the decrypt of a telegram from the Japanese Ambassador in Berlin had reported the views of the German Ministry of Foreign Affairs. It estimated that between 75 and 85

* It has been said that the Germans used the Japanese embassy in Vichy to spread false information about their dispositions.³³ It will be seen from these and subsequent decrypts from this source that, if this is true, the deception did not find its way into the reports made to Tokyo. For Allied intelligence on the transfer of two newly-formed infantry divisions and 9th SS Panzer Division to the south of France and of 2nd SS Panzer Division to Bordeaux, see below pp 72–73. The move of 272nd Infantry Division from Lyons to Perpignan had been disclosed by Enigma decrypts by 28 March.³⁴

† No doubt because he would have preferred that *Anvil* should be cancelled altogether, except as a threat, the Prime Minister asked on 4 April that the decrypts should be shown to General Eisenhower with his compliments.³⁵

31. AWL 1702 of 21 March.

32. BAY/KV 15 of 7 April.

33. Hastings, *Overlord* (1984), p 67.

34. DEFE 3/152, VL 9644 of 28 March; AWL 1775 of 1 April.

35. Dir/C Archive, 6175 of 4 April.

36. AWL 1532 of 18 February.

37. AWL 1558 of 25 February; WO 208/3573 of 7 March 1944.

divisions had been assembled in Britain but judged that the second front was being postponed; air reconnaissance had suggested that the Allies had enough shipping for a landing but not for bringing up supplies.³⁸ Summing up on 1 March the JIC had concluded that 'Germany . . . expects that the main attack will be made against the coastline facing the English Channel or possibly against Brittany, probably in conjunction with diversionary landings in the west and south of France. . . . The Germans probably appreciate that the Allies will not be ready to undertake large-scale operations from the United Kingdom within the next two or even three months unless there is a substantial weakening of the German forces in France and the Low Countries'.^{39*} In the middle of March the decrypt of a telegram from the Japanese embassy in Madrid had quoted the Spanish authorities as believing that the second front would not be opened before April; the Allies had not yet completed the concentration of their assault forces in England or assembled enough landing craft in north Africa and, as the Germans were moving high quality troops from the west to Russia, the Allies would wait until the west had been weakened by these transfers.⁴¹

From other decrypts it was clear, however, that the German operational commands were not relaxing their vigilance. On 23 February a GAF Enigma decrypt had stressed that Allied preparations were well advanced: W/T activity had indicated that some bombers had been withdrawn for use in airborne landings and that airfields in the south-west were heavily occupied with transport aircraft and gliders, while other evidence, presumably air reconnaissance, showed that Bristol was 'particularly heavily occupied' with shipping.⁴² On 5 March an OKM appreciation assessed the results of air reconnaissance over the Scottish anchorages: between four and six divisions were assembled, and as there was sufficient shipping on the east coast to transport them, the Allies might be considering an operation to prevent the withdrawal of further German forces from the north. This

* The JIC was relying on monthly analyses of Germany's appreciations of Allied intentions prepared by MI 14 and NID 12 and based not only on decrypts but also on intelligence derived from other sources – the European Press and radio, Allied diplomatic reports, the SIS and SOE. NID 12's analysis of 8 February had noted that the Germans knew from experience that 'they cannot rely on their Intelligence Service to warn them of impending attacks . . .' MI 14's first analysis was issued on 5 February.⁴⁰

- 38. AWL 1589 of 1 March.
- 39. CAB 121/413, SIC file D/Germany/2, Vol 2, JIC(44)66(o) of 1 March, paras 7 and 8.
- 40. WO 208/3573 of 5 February 1944.
- 41. AWL 1670 of 16 March.
- 42. DEFE 3/141, VL 6878 of 23 February.

appreciation was not decrypted until 22 March.⁴³ It was followed by an appreciation from C-in-C West of 21 March. Decrypted on 6 April, this said that the Allied preparations were 'as good as complete', all information indicating that the jumping-off base would be 'the occupied west coast'; he was bringing 21st Panzer Division to Brittany to strengthen the defensive grouping behind his west coast front.* The C-in-C went on to say that agents had reported that the invasion had been postponed for a time, and he himself believed that the recent increase in Allied air attacks on communications behind the Channel front did not mean that the main attack was imminent since it must be expected that they would become still more intensive and continuous before that point was reached. He added that agents had also reported the completion of invasion preparations in north Africa, so that an undertaking against the south coast of France had always to be allowed for.⁴⁴ C-in-C West's conclusion that the invasion was not imminent was echoed in another decrypt of 6 April, that of a signal in the recently broken cypher of the Japanese Naval Attaché in Berlin.† He reported that the authorities there were inclined to believe that the second front would be opened after the period of mud on the eastern front, and thus in June or July.⁴⁵

The evidence in C-in-C West's appreciation that the Allies had not succeeded in concealing the threat to western France might have been thought disturbing – the more so as it was reinforced by the decrypt on 19 March of a telegram from the Japanese Ambassador to the effect that the Germans did not now believe that the Allies would make an organised attack on the Dutch coast.⁴⁶‡ But on 9 April 21st Army Group, while accepting that the enemy had reduced his estimate of the risk to the Low Countries and the Mediterranean coast, believed that he still expected 'an assault anywhere from the Pas de Calais to the Bay of Biscay';⁴⁷ and reassurance to this effect was soon obtained from decrypts of other appreciations. These appreciations, moreover, by no means accepted that the invasion had been deferred. An appreciation by

* For this movement and that of 3rd Parachute Division to Brittany see below p 75.

† See Appendix 6(i).

‡ This decrypt was followed by evidence that the Germans were reducing their armoured cover for the Low Countries by moving 2nd Panzer Division from Cambrai to Amiens and 12th SS Panzer Division from Antwerp to Evreux. See below pp 75–76.

43. DEFE 3/150, VL 9126 of 22 March.

44. DEFE 3/36, KV 353 of 6 April.

45. SJA 20 of 6 April.

46. AWL 1683 of 19 March.

47. WO 205/532, 21st Army Group Weekly Review of 9 April 1944.

Foreign Armies West dated 20 March, and decrypted on 12 April, read as follows:

'Numerous items of information about the alleged postponement of the invasion or its complete abandonment in favour of intensified air warfare and small-scale local landings . . . are a planned cover for the actual intentions. Such reports are refuted by, *inter alia*, reports from numerous sources of troop movements throughout England which show a considerable increase on previous months. Similar indications are given by the great intensification of the signals traffic of the agents' and resistance organisation in France; this has increased by about 70 per cent as against January and February. Continuing observation of enemy air attacks, agents' activities and agents' wireless networks in the occupied areas of the west unanimously and clearly show concentrations in the areas Pas de Calais, Paris, Tours, Loire estuary and the south coast of France'.⁴⁸

In another appreciation of 23 March, also decrypted by 12 April, Foreign Armies West repeated that General Patton had arrived in England and was possibly commanding two US Armies, and that operations against the south of France were to be expected, though not at once.⁴⁹ On 13 April the decrypt of another Army appreciation, dated 6 April, reported that the disposition of the Allied Air Forces, the move of Command HQs from London to Portsmouth and the co-ordination of British and American W/T all pointed to 'a further step in the concluding phase of invasion preparations'.⁵⁰

These German appreciations were followed on 15 and 27 April by decrypts of signals from the Japanese Naval Attaché in Berlin. The first, the account of an interview on 4 April with Admiral Meisel, Chief of the Naval Operational Staff, reported as follows. The Allies had completed their preparations and had concentrated their main force in southern England; taking the weather into account, they were more likely to move in May–July than in April, but they might choose April from the wish to co-ordinate the invasion with the Russian offensive in the south. Although it was so heavily defended, northern France remained the most likely place as it gave the Allies the shortest distance; but there would probably be a pincer movement from the Mediterranean and Biscay and fairly strong commando operations to cut sea communications in Norway, and possibly a landing in Greece to secure air bases. There was, however, no information on which to base a reliable forecast. Asked about the possibility that the Allies might desist from invasion and rely on intensified air attack while

48. DEFE 3/38, KV 773 of 12 April.

49. *ibid.*

50. *ibid.*, KVs 848 and 965 of 13 and 14 April.

the invasion threat tied down large German forces, Meisel replied that they were bound to invade; they would wish to forestall Soviet penetration of central Europe, and the British could not withstand a long war of attrition.⁵¹ A second decrypt, received on 27 April and reporting an interview on 13 April, disclosed that Meisel had by then concluded that the second front would start soon, possibly within four weeks. Although he could not wholly exclude the possibility that the Allies were conducting a deception programme, he believed that all the evidence – the concentration of troops and shipping in southern England; an increase in daylight air raids in France, and of Allied espionage activity there; the fact that severe restrictions had been imposed on the civilian population in the United Kingdom and could not be maintained for very long – pointed to that conclusion. The evidence included the interrogation of captured agents, and articles taken from them, which suggested that the Allies would mount ‘a direct second front’ without diversionary operations in the Mediterranean and Norway, and that the landings would take place in northern France. There were still no firm indications of the Allied plans: since ‘thorough’ GAF reconnaissance had observed no concentration of landing craft on the south-east or southern coast of England, it was concluded that the concentration was in the west coast ports, but they were difficult to reconnoitre.⁵² In a third signal, decrypted on 27 April and reporting yet another interview with Meisel on 17 April, the Attaché enlarged on the reasons for the change in the Navy’s opinion: the extension of Allied bombing to communications and airfields; the establishment of a security zone in the UK and the prohibition of inward and outward mail; the news that war correspondents had been attached to invasion forces; evidence of landing exercises; statements by British political leaders.⁵³

Naval, air and army decrypts had meanwhile disclosed that the Germans had indeed concluded that the invasion was imminent. The naval Enigma decrypts of 20 April included a proclamation from Dönitz to all ranks to the effect that a large-scale landing in western France was to be expected at any time.⁵⁴ On 24 April the GAF Enigma disclosed that Luftflotte 3 was instituting procedures for the interrogation of POW taken from the invasion forces.⁵⁵ On 27 April an army decrypt revealed that Hitler had

51. SJA 54 of 15 April.

52. BAY/KVs 59 and 67 of 27 and 29 April.

53. BAY/KV 60 of 27 April.

54. DEFE 3/408, ZTPG 232340 of 20 April.

55. DEFE 3/42, KV 1867 of 24 April.

cancelled all leave in C-in-C West's command from 26 April.⁵⁶ On 29 April the decrypt of a telegram from the Japanese Ambassador disclosed that the Ministry of Foreign Affairs in Berlin was taking the threat seriously on 24 April; it had informed him that if the threat did not materialise that week the landings would have to be postponed for several weeks, but that it had believed for some days that they would be attempted in the near future.

From 18 April, and especially from 26 April, there was a marked increase in day and night reconnaissance by the GAF between Dover and Land's End, in Scotland and over Scapa Flow; it lasted until the alarm subsided, and was accompanied on the south coast by minelaying and bombing raids on ports.^{57*} Among the Enigma decrypts reporting on this activity, which showed that a number of Me 410s had been brought in for reconnaissance,⁵⁸ two disclosed that on 25 April and 8 May no penetration overland had been achieved and several offshore sorties had had to be broken off; but one gave details of a large concentration of warships and assault shipping in Plymouth and noted that such good cover had not been obtained since August 1943, and others recorded that assault shipping had been detected.⁵⁹

E-boat activity off the south coast also increased. It included a successful attack at 0220 on 28 April on Exercise *Tiger*, a trial landing by Force U on Slapton Sands in the south-west of Lyme Bay. They sank two LSTs (large ships carrying tank landing craft) and damaged a third. This was a serious set-back for the Allies in view of the shortage of landing craft; and the loss of life – some 700 men, many of them engineers – was greater than that incurred by Force U in the landings on Utah beach.⁶⁰ As was invariably the case with E-boat operations, Sigint gave no warning of the attack. A signal disclosing that nine E-boats were to leave Cherbourg at 2200/27 April for operations to the westward was not decrypted till late 28 April. Other signals decrypted after the event revealed that the E-boats had caused alarm in the German naval commands by sighting Allied landing craft about 20 miles from Slapton Sands on an easterly course, but that Senior Officer E-boats had by 0347 on 28 April appreciated that as the landing craft had turned north, and as the E-boats had been in the area

* See above pp 43–44 fn‡ and, for the FX raid on Plymouth at the end of April, Volume III Part 1, p 326.

- 56. DEFE 3/43, KV 2161 of 27 April.
- 57. AWL 1942 of 1 May; WO 219/1918, Nos 5 of 22 April, 6 of 29 April; WO 219/1919, No 8 of 13 May 1944.
- 58. AWL 1931 of 29 April.
- 59. CX/MSS/T166/105.
- 60. ADM 234/366, BR 1736(42) (1), p 65; Harrison, op cit, p 270.

west of a line Portland–Casquets since 2300 on 27 April without sighting large Allied formations, no major Allied landing attempt need be assumed.^{61*}

The Chiefs of Staff expressed some anxiety on 2 May about the Sigint evidence on the results of the German air and E-boat reconnaissance.⁶² Their anxiety was justified by the receipt on 14 May of the decrypt of a situation report of 8 May from C-in-C West, which gave this assessment of the results obtained: 'Although visual and photo reconnaissance has not been able to cover the whole of the English south coast, it is clear from observed concentrations of assault shipping in the Portsmouth–Southampton area that a special build-up (Schwerpunkt) is being formed there.'^{63†}

By the early days of May the alarm was over, as was soon confirmed by the Japanese diplomatic decrypts from Berlin. On 6 May, in a telegram decrypted on 11 May, the Ambassador disclosed that the favourable period late April to early May having passed, there was a strong body of opinion that the invasion would now be postponed for two or three weeks.⁶⁷ On 9 May, in a telegram decrypted on 13 May, he added that Dönitz had told him that, although domestic and international pressures would still compel the Allies to invade in 1944, they would not do so 'for some time'; they probably realised that Germany's 'somewhat precipitate withdrawal' on the eastern front reflected the transfer of some of her finest troops to the west and were thus being forced to increase the scale of their invasion measures.⁶⁸ But even before these signals were decrypted, it was the turn of the Allies to be alarmed

* This belies the claim in the official history (see Ellis, *Victory in the West*, Vol I, (1962) p 33) that the Germans did not associate the Allied activity with invasion preparations.

† On 19 May the decrypt of a signal of 11 May from the Japanese Naval Mission in Berlin said that GAF PR of a week before had detected, in addition to many landing craft at south coast ports, 'a floodable sort of pontoon which could be sunk for use as landing piers'.⁶⁴ The mission had previously speculated that the Allies might have developed some unconventional device to make them independent of a major port during the early stages of the invasion,⁶⁵ but does not appear to have realised that the floodable pontoons were that device (Mulberry). Nor did it link the pontoons with the fact which had been reported in a decrypt of 27 April – that the Germans had got wind of the Allied development of a submarine pipeline (Pluto).⁶⁶

61. ADM 223/117, Ultra signal 2001/28 April; DEFE 3/44, KV 2273 of 28 April; ADM 223/172, OIC SI 903 of 29 April; ADM 223/287, Use of Special Intelligence during Operation Neptune, (USION) pp 41–43.
62. CAB 121/394, SIC file D/France/6/12, COS(44)142nd(o) Meeting, 2 May.
63. DEFE 3/155, KV 3763 of 14 May.
64. BAY/KV 146 of 19 May.
65. BAY/KV 123 of 13 May.
66. BAY/KV 64 of 27 April.
67. BAY/KV 106 of 11 May.
68. BAY/KV 121 of 13 May.

by intelligence to the effect that the Germans might have discerned where they intended to land.

This intelligence, more disturbing than C-in-C West's reference in March to the threat to Brittany,* or than the decrypts in April and early May in which the enemy had noted the movements of Allied Command HQs to Portsmouth and the concentration of Allied shipping in the Portsmouth–Southampton area,† came in a signal from Luftflotte 3. Sent on 8 May and decrypted the same day, it reported that the main effort of Allied fighter activity during 7 May had 'consisted unmistakeably of attacks . . . on the course of the Seine between Mantes and Le Havre', and went on to say: 'From this the view of Luftflotte 3, already often expressed, that landing is planned in the area Le Havre–Cherbourg, is confirmed once more'.⁶⁹ Its receipt coincided with the decryption of signals from the Japanese Naval Attaché in which he reported that, on a tour he had made of northern France between 20 and 24 April, he had learned that the German commands, particularly the Navy, believed on topographic and strategic grounds that the landings would centre on Boulogne, with the main force to the east, but also that diversionary landings with detached forces were quite probable in the Le Havre–Cherbourg area, on the Dutch coast and on the west coast of Denmark.‡

The Attaché's report, referring back to the third week of April, did nothing to reduce the anxiety aroused by Luftflotte 3's appreciation of 8 May. Nor could GC and CS offer any reassurance; asked to check the translation of the appreciation to see whether the text could mean 'diversionary landing' or 'landings', it found that the context favoured the interpretation of 'landing' to mean 'main landing'.⁷⁰ Between 9 and 14 May the anxiety expressed itself in agitated exchanges between the Prime Minister and 'C' and the CIGS. 'C' could only say that the Air Force's appreciation might not be in accord with that of the Army or with the views held in Berlin. The CIGS replied to the Prime Minister in similar terms: 'We have no evidence that C-in-C West accepts the views of the Luftflotte 3. Nor have we any indication

* See above, p 53.

† See above, pp 54, 57.

‡ For these decrypts see Appendix 7. Earlier decrypts having established the dates on which the Attaché was to make this tour, steps were taken to ensure that a complete and uncorrupt text of his report was intercepted by alerting the Y stations at Freetown, Mauritius, Abbotabad and Brisbane. Although the Attaché sent his report to Tokyo in thirteen signals by three different routes, a good text of all thirteen signals was received at GC and CS by the evening of 6 May.

69. DEFE 3/47, KV 3242 of 9 May; DEFE 3/153, KV 3281 of 9 May.

70. DEFE 3/153, KV 3281 of 9 May.

from Most Secret Sources that he yet appreciates we shall land in an area more closely defined than somewhere between Belgium and Brittany. The dispositions of the German forces in France and the Low Countries support this. I understand that SCAEF has arranged that his air forces shall try to direct Luftflotte 3's attention to some other area'. To this minute the Prime Minister replied that 'the greatest care must be taken . . . [to] confuse the Luftwaffe's outlook'.⁷¹

The CIGS's minute, issued on 13 May, took advantage of the decryption that evening of an appreciation by the C-in-C West.* Like that of Luftflotte 3, it had been made on 8 May, and it went some way towards providing relief in Whitehall. Its main conclusions were:

1. On the basis of the amount of invasion shipping observed, the Allies would probably employ 20 divisions, and possibly more, in the first wave; in addition they would use strong air-landing forces with the object of forming a bridgehead.
2. Although the whole Channel front from the Scheldt to the tip of Brittany was under threat, the most threatened sector appeared to be 'roughly from Boulogne as far as Normandy inclusive'.
3. Given the importance to the Allies of capturing Le Havre and Cherbourg, Normandy and perhaps also Brittany were likely areas for the strong airborne attacks.
4. Defence in the most threatened sector had been strengthened by 'the bringing up of 2nd Parachute Division and 7th Werfer Brigade and by elements which had already arrived of 91st Air Landing Division and of Panzer Lehr Division'.† In addition Normandy was being strengthened 'also in the interior against air landings by special measures . . .'.‡

The C-in-C's acceptance that the Allies might land anywhere between Belgium and Brittany was echoed in signals from the Japanese Naval Attaché in Berlin. In a signal decrypted on 13 May

* See Appendix 8.

† See below pp 76, 77, 79–80, for the intelligence received about these troop movements to Normandy.

‡ These perhaps included the move of 21st Panzer Division to Caen, for which see below pp 80–81. Although the C-in-C did not mention 21st Panzer's move in this appreciation, it was then in train, and it was directed against airborne troops as well as against seaborne attack. On D-day 21st Panzer was in fact the chief threat to the British airborne troops.

he stated that if the Allies wanted swift landing operations they would probably choose Biscay and the Mediterranean, but that if indeed the landings were to be made in northern France, he personally agreed with the assessment, given to him during his tour, that the main force would attack east of Boulogne, with diversionary landings probable between Le Havre and Cherbourg and elsewhere.⁷² On the same day the decrypt of a separate signal from him disclosed that Meisel had told him that while a landing on the west coast of France could not be ruled out, Biscay was less likely than the north coast of France if only because the landing craft observed in the Portsmouth area were 'unsuitable for long-distance operations'.⁷³ It remained disturbing, even so, that C-in-C West had singled out the sector from Boulogne to Normandy inclusive as the most threatened sector and had stressed the fact that Normandy was being reinforced, and Allied anxiety again increased when, between 14 and 27 May, Sigint disclosed that its reinforcement included the transfer of 21st Panzer Division to Caen and the strengthening of the German forces in the Cotentin peninsula in a manoeuvre that was more purposeful and greater in scale than any the Germans had so far carried out. This came just in time for the American Commands to make last minute changes in their plan for the airborne landings behind the Cotentin peninsula.*

Some post-war commentators have argued that this development was due to the fact that Hitler had firmly concluded during April that the invasion would come in Normandy.⁷⁵† The JIC was at the time briefly inclined to take a similar view. On 22 May the first of three weekly reports it issued on 'German Appreciation of Allied Intentions Regarding Overlord' stated that:

'The main assault is expected against the northern coast of France from Boulogne to Cherbourg inclusive. Although the German High Command will, until our assault takes place, reckon with the possibility that it will come across the narrow Straits of Dover to the Pas de Calais area, there is some evidence that the Le Havre–Cherbourg area, including as it does

* See below, pp 80–82 and Appendix 9 for further details. From Chequers late on 28 May the Prime Minister requested by telephone that the latest report on enemy movements in the *Overlord* area should be sent to him.⁷⁴

† It has also been claimed that Milch, the Inspector General of the GAF, reached the same conclusion after considering the pattern of the Allied preliminary air offensive.⁷⁶

72. BAY/KV 113 of 13 May.

73. BAY/KV 120 of 13 May.

74. CAB 121/394 Record of telephone message.

75. Winterbotham, *The Ultra Secret* (1974), pp 154–156.

76. Irving, *The Rise and Fall of the Luftwaffe* (1973), p 278.

those two first class ports, is regarded as a likely, and perhaps even the main, point of assault.⁷⁷

A week later it reiterated this warning in somewhat more emphatic terms:

'The recent trend of movement of German land forces towards the Cherbourg area tends to support the view that the Le Havre–Cherbourg area is regarded as a likely, and perhaps even the main, point of assault.'⁷⁸

Further evidence in support of this conclusion was provided in the decrypt of a report from a German agent in Lisbon – probably available in London on 1 June – to the effect that 'the plan of attack favoured by the Allies was an assault on La Manche [Cherbourg] peninsula'.⁷⁹

The decrypt on 1 June of the Japanese Ambassador's telegram reporting an interview which Hitler had granted him on 27 May quoted Hitler as saying that the Allies had completed their preparations; that they had assembled 80 divisions, eight of which had combat experience and were 'very good troops'; that after diversionary operations in Norway, Denmark, south-west France and on the French Mediterranean coast, they would establish a bridgehead in Normandy or Brittany; and that after seeing how things went, they would embark on establishing a real second front in the Straits.⁸⁰

It was no doubt with mixed feelings that the authorities scrutinised this decrypt, which was the first diplomatic decrypt to be sent to the *Overlord* Commands by GC and CS with maximum priority. It indicated that neither the Allied deception programme nor the enemy's shortage of good intelligence had prevented the Germans from appreciating that the Allies would probably deliver not merely diversionary landings but even their initial main assault in Normandy, and that it was on this account that the defence forces in Normandy, hitherto comparatively weak, had recently been strengthened. On the other hand, it reiterated the assumption, adopted in Germany from the outset on grounds of inherent military probability, that wherever the initial landings might come, the Allies would direct their major effort against the Pas de Calais; and to this extent it indicated that, if only because the deception plan had led him to exaggerate the scale of the Allied preparations, the enemy remained far from certain of the place of the coming invasion.

77. CAB 121/394, JIC(44)214(o) of 22 May.

78. *ibid*, JIC(44)221(o) of 29 May.

79. Hinsley and Simkins, *op cit*.

80. BAY/KV 179 of 1 June.

By 1 June such recent evidence as was obtained from decrypts had favoured the conclusion that of the two hypotheses prompted by Hitler's remarks, the second deserved the greater weight. On 27 May another appreciation from Luftflotte 3 was decrypted; it differed little from that of 8 May, stating that the pattern of Allied air attacks on the Seine bridges during 27 May had 'reinforced the views already expressed by Luftflotte 3 as to the probable Allied intentions against the Dieppe and the Seine Bay areas', but at least it was still concerned about the threat to both sides of the Seine.⁸¹ By 30 May, however, the Enigma decrypts had disclosed that the GAF had introduced contingency measures on 28 May against landings in Italy and the French Riviera. 'These measures', commented the Air Ministry, 'reflect not firm intentions but rather German indecision. The GAF has no clear view as to the direction of the next Allied threat . . . even if northern France continues to be the first priority . . .'⁸² Since the beginning of May Sigint had referred to the existence of similar contingency plans in the Aegean, the western Mediterranean, Denmark and Norway,⁸³ as also to anti-invasion preparations and exercises in sectors of northern France other than Normandy,⁸⁴ and to actual short-lived alerts in several western areas.⁸⁵ It would have been easy to place too much reliance on this evidence as proof that the Germans remained radically unsure of the main thrust of the Allied plan. But there was no mistaking the significance of another GAF decrypt of 30 May. It disclosed that the GAF had been planning since 30 April to lay defensive minefields and that it was now making final preparations for laying them from Ostend to the Garonne. As AI noted, this was the first Sigint reference to defensive sea mining from the air since Operation *Starkey* in September 1943.^{86*}

It was on this evidence, and also on the negative evidence that there had been no Sigint references since 28 May to further German troop deployments affecting Normandy, that on 3 June, in its final assessment of the German appreciation of Allied

* These minefields were to cause more Allied shipping losses from D-day than any other form of attack at sea.

- 81. DEFE 3/161, KV 5446 of 27 May.
- 82. AWL 2118 of 30 May (Air Sunset 177).
- 83. DEFE 3/153, KV 3498; DEFE 3/155, KVs 3884 and 3924; DEFE 3/160, KV 5186; DEFE 3/163, KV 5813, dated 11 to 30 May.
- 84. DEFE 3/153, KV 3434; DEFE 3/154, KVs 3552 and 3582; DEFE 3/156, KVs 4153 and 4230; DEFE 3/157, KVs 4301, 4423 and 4477; DEFE 3/158, KVs 4559 and 4728, dated 10 to 21 May.
- 85. DEFE 3/153, KV 3256; DEFE 3/154, KV 3687; DEFE 3/155, KV 3918; DEFE 3/163, KV 5956, dated 9 May to 1 June.
- 86. DEFE 3/163, KV 5762 of 30 May.

intentions, the JIC ignored the Japanese Ambassador's interview with Hitler and reached a more relaxed conclusion than that of 29 May. On the positive side the JIC emphasised the preparations that were being made for defensive minelaying by air along the whole of the north and west coasts of France, and it also noted that defensive sea-minelaying had continued in areas from the Belgian coast round to the Gironde. It summed up as follows:

'There has been no intelligence during the last week to suggest that the enemy has accurately assessed the area in which our main assault is to be made. He appears to expect several landings between the Pas de Calais and Cherbourg.'⁸⁷

As for German expectations of the timing of the assault, the JIC repeated the assessment it had given on 19 May: 'the enemy considers Allied preparations sufficiently advanced to permit of operations at any time now'. Since the German recovery from the major alarm at the end of April there had been few explicit Sigint references to this subject. But these assumed that, as the Allies had completed their preparations, they might attack at any time. C-in-C West's appreciation of 8 May, decrypted on 13 May,* had noted that although agents were reporting a plethora of landing dates, mainly pointing to the middle of May, the invasion was bound to be heralded by ceaseless air attacks, and that 'this stage cannot yet be recognised'. It had allowed, however, that the landings might come as soon as the favourable weather, 'a series of days of continuous fine weather', set in. On 19 May, in a telegram decrypted on 23 May, the Japanese embassy had reported that the German Foreign Ministry had informed it that the invasion was 'not far off'; for this reason, and also because other landings were expected in southern France and Dalmatia, Germany would not fall into the trap of diverting troops from France against the Allied offensive in Italy.^{88†}

There were no further changes in the intelligence picture before MI 14 issued its final assessment of German expectations

* See Appendix 8.

† It has been suggested that one other decrypt, of 29 May, indicated that C-in-C West did not expect the invasion in the first ten days of June.⁸⁹ It was a request for a fuel reserve to be made available for construction work to which the C-in-C added the statement that 'recourse would only be had to this reserve if after the first ten days of June the situation could be reviewed as a whole'.⁹⁰ But if this statement meant anything it could only have been a further indication that the C-in-C remained of the opinion that the landings would come at any time.

87. CAB 121/394, JIC(44)232(o) of 3 June.

88. BAY/KV 167 of 23 May.

89. Lewin, *Ultra goes to War* (1978), pp. 313–314; Bennett, *Ultra in the West* (1979), pp. 51–52.

90. DEFE 3/162, KV 5689 of 29 May.

on 5 June. This concluded that the enemy expected the invasion 'at any time now', though it noted that he had not yet instituted the U-boat patrols he had planned for the western approaches to the Channel and the Bay of Biscay.* It believed that he still thought the most threatened area was from Boulogne as far as Normandy inclusive, but noted that he was still carrying out defensive minelaying from the Belgian coast to the Gironde, that he was still over-estimating the size of the Allied force and that he was still reckoning with the possibility of diversionary operations against the Biscay coast and Norway and with the probability of amphibious attacks against the south of France and in the Gulf of Genoa.⁹¹ In the light of the known dispositions of the German infantry, SHAEF agreed with this assessment; it added that 'the enemy sees the greatest threat to one or more of four groups of ports – Pas de Calais, Le Havre, Cherbourg, Brest'.⁹²

As we now know, the Germans did not believe in the few days before D-day that the landings were imminent, and they remained uncertain of their destination. On 1 June, in an appreciation that was not decrypted till 11 June, Foreign Armies West believed that the period from 12 June onwards must be considered the new danger period.⁹³ In an appreciation of 5 June that was not decrypted, C-in-C West similarly concluded that 'as yet there is no immediate prospect of the invasion', and he had this to say about the areas of the threat:⁹⁴

'The main front between the Scheldt and Normandy is still the most probable place of attack. Its possible extension along the north coast of Brittany, including Brest, is not excluded. Where within this entire sector the enemy will attempt a landing is still obscure. Concentration of enemy air attacks on the coastal fortifications between Dunkirk and Dieppe, and on the Seine–Oise bridges, in conjunction with the paralysing of supply services and of the southern flank between Rouen and Paris (inclusive) might be indicative of the main front of a major landing intended by the enemy. However, the cessation of traffic across the Seine would equally affect troop movements required in the case of an enemy attack on the western part of the Baie de la Seine, Normandy and the North coast of Brittany. As yet there is no immediate prospect of the invasion.'

On the same day Army Group B, in another report that was not

* See below, pp 97–98.

- 91. WO 208/3573 of 5 June 1944.
- 92. CAB 44/243, *Operation 'Overlord'*, p 40.
- 93. DEFE 3/170, KV 7502 of 11 June.
- 94. AL 1623, OB West Lagerbeurteilung 4 January – 11 July 1944, held in the Imperial War Museum and quoted in Ellis, *Victory in the West*, Vol 1 (1962), p 129.

decrypted, considered that the concentration of the Allied air attacks between Dunkirk and Dieppe pointed to 'the previously assumed focal point of the major landing' – the Pas de Calais.⁹⁵

□

Closely connected with Germany's uncertainty as to when, where and on what scale the Allied attack would come was her uncertainty as to how best to oppose it. Should she give priority to defeating it on the beaches or hold back her offensive divisions with a view to destroying the assault forces by counter-attack after they had landed?* The intelligence sources revealed that the German commanders themselves remained divided on the subject.

The COSSAC plan had assumed that because the enemy had to defend so long a coast-line, he would group his mobile reserves methodically, so that they could move at high speed against the weakest or most accessible point of the bridgehead, but would delay the counter-attack until he had determined the scope of the assault, and that he would be unable to do this before D+2 on account of the risks of Allied landings elsewhere. This remained the assumption when the COSSAC plan was revised; as the JIC concluded on 1 March, the enemy 'cannot rely on being able to defeat us on the beaches. He must plan to conserve and concentrate so as first to prevent the enlargement of the main bridgehead and then to counter-attack to drive us into the sea'.⁹⁶ At the beginning of February, indeed, it had received some support from the decrypt of the Japanese Ambassador's telegram reporting on his interview with Hitler on 22 January: Hitler had said that while everything would be done to prevent the enlargement of any bridgehead, it was impossible to repulse every landing at the water's edge.⁹⁷ On 18 February, however, another Japanese decrypt – that of a telegram from the Ambassador in Vichy about an interview with Abetz, the Military Governor in France – had disclosed that the Germans were divided as to whether to aim to drive an invasion force back into the sea as soon as possible or to allow it to land and then surround and destroy it.

* It is of interest that at no stage did the Allied intelligence authorities believe that Germany would resort to the use of gas against the invasion. For a full discussion of the intelligence on chemical warfare see below, p 573ff.

- 95. AL 1562/1, Geschichte OBW, Part 1, item 47, held in the Imperial War Museum and quoted in Ellis, op cit, Vol 1, p 129.
- 96. WO 219/1837, General Morgan to ACOS-G2 SHAEF, 4 January 1944; CAB 121/413, JIC(44)66(o) of 1 March.
- 97. AWLs 1472 and 1494 of 8 and 11 February.

Abetz had said that he preferred the former course as being less likely to encourage the resistance forces in France, but that the decision lay with the military authorities.⁹⁸

A month later the decrypt of a signal by the Japanese Military Attaché in Vichy revealed that the decision had gone as Abetz had wished. The Attaché had been informed by Rundstedt's Chief of Staff on 17 February that the primary object of the defences in Holland, Belgium and France was to enable the Germans 'to hold firmly on to the coast'. Their strategic aim was to destroy the Allies at sea and on the beaches. If they failed in that, they would try to destroy them as close to the coast as possible; there was to be no question of luring them inland.⁹⁹ He expanded on this report in a further signal on 28 February, decrypted on 27 March. Headed 'German Army's New Defence Policy in Holland, Belgium and France', this explained that up to January the German plan had been primarily to hold the coast but, if the situation demanded it, to allow the Allies to penetrate a certain distance before launching a counter-offensive. Following Rommel's appointment, to command Army Group B,* however, it had been decided to hold the coast 'absolutely'. As a result, there had been changes in troop dispositions. Previously the large number of infantry and armoured divisions which were to come under Rommel's command for the counter-offensive had been held back as a reserve at Rundstedt's disposal. Now, all the infantry divisions of the general reserve were allotted to the various Armies and only the armoured forces (nine divisions under General Geyr von Schweppenburg) remained at Rundstedt's disposal. The change had been made because experience in the Mediterranean had shown that the Allies did not move quickly and boldly after consolidating their bridgeheads, and generally sought to use air superiority to control the rear of the defending forces; moreover, there were great political disadvantages in letting the Allies advance inland.¹⁰⁰

These decrypts coincided with the first Enigma references to the existence in France of Army Group B and the armoured command – Panzer Gruppe West. Enigma decrypts established on 11 and 18 March that the HQ of Panzer Gruppe West was at Paris and confirmed on 19 and 21 March that Rommel commanded Army Group B, which appeared from Traffic Analysis to have its HQ at St Quentin.¹⁰¹ Together with existing information about

* See above, p 46, for the intelligence on this appointment.

98. AWL 1550 of 23 February.

99. AWL 1702 of 21 March.

100. AWL 1738 of 27 March.

101. DEFE 3/146, VL 8188 of 11 March; DEFE 3/149, VLs 8758 and 8846 of 18 and 19 March; DEFE 3/150, VL 9037 of 21 March.

the chain of command, they suggested that Army Group B, with Fifteenth and Seventh Armies, and Panzer Gruppe West were each directly subordinate to C-in-C West, who himself also commanded Army Group D with First and Nineteenth Armies. But they left some uncertainty as to whether and to what extent Rommel was under Rundstedt.¹⁰²

As it happened, the decisions reported by the Attaché had not prevented continuing disagreement between Rundstedt and Rommel. In pursuit of the policy of destroying the invasion on the beaches, Rommel requested in March that all armoured and motorised units and all GHQ artillery should be placed directly under his command; but Rundstedt protested and towards the end of March a compromise was reached. Three of the armoured divisions (2nd Panzer, 21st Panzer and the newly constituted 116th Panzer) were assigned to Rommel and four (1st SS Panzer – Adolf Hitler – 12th SS Panzer, 17th SS PG and Panzer Lehr) were kept as a central mobile reserve under the direct control of OKW. In May the remaining three – the newly constituted 9th Panzer and 11th Panzer and 2nd SS Panzer (Das Reich) – were to be placed under Army Group G in southern France.¹⁰³

The Allies learned nothing about these differences. But they had all along believed that the enemy would be forced to compromise between the need to limit the bridgehead and the need to reserve formations for a counter-attack, and, alerted by the decrypts of the signals from the Japanese Attaché in Vichy, they inferred that the Germans were having difficulty in reaching a compromise. Thus General Montgomery noted on 7 April, during a presentation of his intentions, that Rommel 'is a determined Commander and will hurl his armour into the battle. But according to what we know of the chain of command the armoured divisions are being kept directly under Rundstedt, and delay may be caused before they are released to Rommel . . . quarrels may arise between the two of them'.¹⁰⁴

An indication that the Germans reached some compromise about their mobile reserves followed at the end of April. A decrypt then disclosed that four of the armoured divisions in the west had been placed in OKW Reserve, to be employed only with OKW's permission.* But this left it uncertain whether the remainder were under Rundstedt or Rommel, as did decrypts early in May of signals from the Japanese Naval Attaché in Berlin about his tour

* See below, p 79.

102. WO 208/3573 of 27 March 1944.

103. Harrison, op cit, pp 239, 247–249, 252, 254, 256–257, 262–263.

104. CAB 44/242, p 160.

of northern France. He stated that Rommel had been especially appointed by Hitler to lead an assault army, but that if the Allies invaded in several places their divided forces would be destroyed by Rommel in the north and by Rundstedt elsewhere.*

It was not easy to reconcile this statement with the evidence of the Japanese Attaché in Vichy, to the effect that the armoured forces were to be under Panzer Gruppe West at Rundstedt's disposal, or with the more recent decision to place four of the armoured divisions in OKW reserve. Nor was the situation clarified by the disclosure in a decrypt of 8 May that a new Army Group G had been set up under General Blaskowitz, GOC First Army, to command First and Nineteenth Armies in the south and south-west.¹⁰⁵

In the absence of any further direct intelligence about the chain of command MI 14 concluded on 5 June that Rommel (Army Group B), Blaskowitz (Army Group G) and von Schweppenburg (Panzer Gruppe West) were all directly subordinated to von Rundstedt (C-in-C West and GOC Army Group D). It also concluded that while Panzer Gruppe West would assume an operational role if an additional Army Staff became necessary, it remained mainly administrative for the present.¹⁰⁶ These conclusions were substantially correct.

Within this framework German disagreements about the use of the mobile divisions had continued during May. Rommel, convinced that it would be difficult to manoeuvre the armoured formations under Allied air attack, had pressed that the four divisions in OKW reserve be moved closer to the coast; Rundstedt had resisted.¹⁰⁷ The Allies learned nothing of these further exchanges but from order of battle intelligence they knew the locations of the reserve divisions and they had detected no movement by them. At the same time, however, they had known since April from this intelligence that infantry divisions which had been inland were being moved closer to the seaboard throughout Rommel's command.¹⁰⁸

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* See Appendix 7.

105. DEFE 3/47, KV 3205 of 8 May.

106. WO 208/3573 of 5 June 1944.

107. Harrison, *op cit*, p 257.

108. WO 219/1836, Nos 8, 10, 11, 12 of 3, 16, 23, 30 April; WO 219/1919, No 4 of 15 April; CAB 121/394, CCS 454/5 of 15 April; JIC(44)176(o) of 30 April.

The evidence that the Germans were moving divisions closer to the coast was part of an increasing amount of intelligence about the strength and deployment of the German Army in the west. In the end, as we shall see, it enabled the Allies to make an all but totally accurate assessment of the German order of battle in the *Overlord* area on D-day, but in the meantime it did nothing to reduce their anxieties. It showed that against the general background of an increasing total number of divisions in the west the Germans were bringing in additional armour, were up-grading more divisions to field status and, in particular, were concerned to reinforce the Normandy area.

For the purpose of the Initial Joint Plan the probable strength of the German Army in the west on D-day was set at a higher level than that which the COSSAC plan had regarded as tolerable. It was assumed, on the other hand, that the enemy's ability to bring in reinforcements in the two months after D-day would be less than COSSAC had been prepared to accept. The projections were set out in a JIC paper of 1 March. There would be between 16 and 20 'offensive divisions' (seven of them infantry) and between 39 and 35 'defensive divisions'. A high proportion of the 'offensive divisions' would be at or near full strength, but they would vary in quality. The 'defensive divisions' would probably be well below first-class divisions in quality. Although it did not attempt to assess what the quality would be, the JIC explained that 'an estimate of the opposition to *Overlord* in terms of number of divisions is misleading'. As for reinforcements after D-day, Germany might bring in eight first-quality divisions from other fronts than the Russian in the first two months, and the possibility could not be excluded that five would be switched from the huge number on the Russian front; but this possibility was unlikely to materialise if, as promised, Russia had begun her offensive.¹⁰⁹

These estimates diverged from statements made in recent decrypts of Japanese telegrams; if only for that reason they had been much discussed between MI 14, SHAEF and 21st Army Group before they were issued. A decrypt available on 4 February contained a telegram from the Japanese Ambassador in Berlin reporting that Hitler had told him on 22 January that there were 61 divisions in France and the Low Countries. Thirty of them were 'mobile reserve' divisions. Not all of the reserve divisions were first class, but they included as many armoured formations as possible – in particular, four SS divisions and the Hermann Göring Division – and he was attaching great importance to raising their mobility. Hitler had added that to avoid reducing the forces in the

^{109.} CAB 121/413, JIC(44)66(o) Final (Revised) of 1 March.

west he would yield ground on the eastern front if necessary.¹¹⁰ These figures were not inconsistent with those obtained from two signals from the Japanese Military Attaché in Vichy. The first, dated 9 December 1943 but not fully decrypted till mid-February, had given details of the distribution of Rundstedt's divisions in Holland, Belgium and France; they numbered 31 coastal and 23 'mobile reserve' divisions, including a parachute division east of Paris, and there were also three infantry training divisions, one armoured training division and a newly formed mounted cavalry division.¹¹¹ The second, dated 18 February and issued to the Commands on 23 February, had stated that these forces had been increased by nine divisions and now totalled over sixty.¹¹² Such numbers were considerably in excess of MI 14's estimate of the number of divisions available at the beginning of February: a total of 49 of which not more than 15 were offensive and three were Panzer training divisions that were probably to some extent mobile.¹¹³

In two letters to 'C' on 5 February the DDMI had attempted to account for the discrepancy. The fact that the Hermann Göring Division was known to be in Italy might suggest that the number of divisions given by Hitler might represent the number Germany aimed to have by the summer. Alternatively, in view of his remarks about mobility, and the fact that agents were reporting that cars and lorries were being commandeered and PR was reporting that motor transport shelters were being constructed along main roads, the possibility could not be excluded that she had, or would have, a reserve of motor transport sufficient to enable her to move some of the static divisions to the battle area. Neither of these explanations was reassuring, and the DDMI had added that the CIGS was particularly anxious that unexpected mobility on the part of the so-called defensive divisions might constitute a serious threat to the success of *Overlord*.^{*} 'C' had submitted the letters to the Prime Minister with the text of the decrypt of the Japanese Ambassador's telegram. The Prime Minister had underlined the words 'serious threat'.¹¹⁵ On 14 February Major-General Hollis,

* Anxiety on this score had been aroused at the end of January when the Enigma disclosed that 715th Infantry Division was moving to Italy and ground reports indicated that it had been hastily motorised before leaving Lyons. By the end of February it was known that it had moved in commandeered French buses.¹¹⁴

110. AWLs 1472 and 1494 of 8 and 11 February.

111. AWL 1551 of 23 February.

112. AWL 1550 of 23 February.

113. WO 208/3573 of 5 February 1944.

114. DEFE 3/133, VL 4979 of 27 January; WO 208/3573, of 24 and 31 January; WO 219/1836, No 3 of 27 February 1944.

115. Dir/C Archive, 5595 of 5 February, Letters from DDMI to 'C', DO/Inf 592 and 593 of 5 February 1944.

head of the Chiefs of Staff Secretariat, had testified to the continuing anxiety by requesting the JIC to consider the extent to which COSSAC's pre-conditions for the success of *Overlord* were likely to be met: these were that the Allies should have complete air superiority; that the Germans should not have more than twelve full-strength first-quality mobile divisions with which to counter-attack; that the number of first-quality divisions they could transfer from other fronts in the first sixty days should not exceed fifteen. General Hollis's minute had concluded: 'Before long we shall have to review the position in the above three respects and ultimately take a decision whether . . . we can go ahead or not.'¹¹⁶

On 7 March, uncertain whether the discussion preceding the paper of 1 March had taken account of COSSAC's pre-conditions, Hollis again wrote to the JIC. 'I may be quite wrong, and probably the matter is under constant review, but if it is not so, I suggest the time will soon come when enquiries will be made as to how we stand.' The JIC's Secretary replied:

'The conditions precedent to *Overlord* have been much in our minds . . . and you may be sure that the question is not being overlooked. The position briefly is as follows:

Condition (a) has already been achieved and . . . is being daily intensified.

Condition (b) is not so good. The present position is that there are in France and the Low Countries the equivalent of some 16 full-strength, first-quality mobile divisions. General Eisenhower's staff is of course aware of this. They have not, as far as I know, ever in so many words stated that they are prepared to meet the increased scale of defence. By implication, however, they have done so. I think the argument is that we have in the new *Neptune* plan widened the area of assault and increased the number of invading forces and thus, to some extent, compensated what the Germans have done.

As regards Condition (c) all is well. The JIC in a very conservative estimate have stated that a minimum of 8 first-quality divisions could be transferred from other fronts during the first two months of operations. . . . It is highly unlikely that this figure . . . could be achieved.'¹¹⁷

General Hollis expressed himself as entirely satisfied, and in the next two weeks intelligence indicated that the projections in the paper of 1 March could be scaled down. By 20 March MI 14's total count of divisions in the west had risen to 55, and the number of these that were thought to be 'offensive' was fourteen.¹¹⁸ Agents

116. CAB 121/394, Minute from Hollis to Secretary of JIC, 14 February 1944.

117. CAB 121/390, SIC file D/France/6/11, COS 308/4 and JS/44/178 of 7 March 1944.

118. WO 208/3573 of 20 March 1944.

had reported the arrival of 2nd Panzer Division at Amiens from Russia and of 2nd SS Panzer Division at Bordeaux, which had brought the number of Panzer and PG divisions to nine;¹¹⁹ Enigma had disclosed that 3rd Parachute Division was being set up in France with cadre from 1st Parachute Division in Italy;¹²⁰ and on 24 February the decrypt of an OKH circular signal of 22 February disclosing that 349th, 352nd and 353rd Infantry Divisions were being set up in France had brought the number of three-regiment divisions there to four at a time when the fact that a division of that type (362nd) was being used to counter-attack at Anzio had led to the conclusion that such divisions must be rated as offensive.^{121*} By 22 March, on the other hand, Sigint had suggested that 21st Panzer Division was leaving Mantes possibly, as MI believed, for Italy or Russia,¹²³ and MI had removed it from the order of battle. It had also removed 2nd Panzer Division and two others (10th Panzer and 164th PG Divisions)† for lack of firm evidence of their existence. This reduced the number of offensive divisions from fourteen to ten.

On 22 March the JIC's next periodical review concluded that it was doubtful whether the number of offensive divisions available on D-day would reach even the lower estimate of sixteen given in the paper of 1 March. Of the ten offensive divisions still in the east, the JIC now believed that only seven would be able to reach the bridgehead by D+10, that these would be the equivalent of only five full-strength divisions, and that from the Reserve Panzer Divisions and independent GHQ tank battalions and Corps troops Germany would be able to provide only the equivalent of two further full-strength divisions. It added that in view of the situation in the east, which made it unlikely that she could bring in any battle-worthy divisions from Russia in the two months after D-day, she might have to reduce her present strength in France despite her reluctance to withdraw any first-class divisions.¹²⁴

Early in April it did indeed emerge that three of the offensive divisions, two of them the best in France, had been transferred to

* It was known by now that infantry divisions set up in 1944 – the so-called '1944' divisions – had fewer men but greater fire-power than earlier divisions, mainly as a result of a high ratio of automatic weapons.¹²²

† These had fought well in Tunisia and MI 14 had hitherto assumed that, like 21st Panzer, they would have been reconstituted.

- 119. *ibid*, 27 and 28 February, 6 March; DEFE 3/144, VL 7657 of 2 March; AWL 1614 of 5 March.
- 120. DEFE 3/145, VL 7992 of 8 March; DEFE 3/146, VL 8174 of 11 March.
- 121. DEFE 3/141, VL 6997 of 24 February; WO 219/1836, of 5 March 1944.
- 122. WO 219/1942, Martian Report No 91 of 12 April 1944.
- 123. DEFE 3/149, VL 8953 of 20 March; WO 219/1836, of 26 March 1944.
- 124. CAB 121/394, JIC(44)113 of 22 March 1944.

Russia. By the middle of March agents' reports and the low-grade traffic intercepted by Army Y in England had established that as well as sending 2nd SS Panzer Division to Bordeaux, the enemy had transferred 9th SS Panzer Division from Amiens and two newly formed infantry divisions to the south of France;¹²⁵ but between 7 and 9 April Enigma decrypts disclosed that II SS Panzer Corps comprising 9th and 10th SS Panzer Divisions (10th SS Panzer from Lisieux) was at Lwow en route to assist First Panzer Army, which was encircled in Galicia, and that 349th Infantry Division, known to have been at Lille since January, was also on the Russian front.^{126*} On 6 April, however, the decrypt of a C-in-C West appreciation disclosed that the three Reserve Panzer Divisions in the west (155th, 179th and 273rd) were being reconstituted as full Panzer Divisions.¹²⁸ 21st Army Group regarded this as 'a desperate improvisation', but MI 14 accepted that they would be fully offensive by D-day.¹²⁹ By 10 April, moreover, it had on further consideration restored 21st Panzer Division and added 2nd Panzer, of whose presence it had hitherto been sceptical, to the order of battle in France. Its estimate of the number of offensive divisions in France at that time was accordingly eleven: five Panzer Divisions (2nd and 21st and the three Reserve Panzer Divisions); three SS Divisions (2nd and 12th SS Panzer and 17th SS PG); 3rd Parachute Division; and 2 three-regiment infantry divisions (352nd and 353rd). Though it had no doubt that, subject to her difficulties on the eastern front, Germany would bring the number back to 55, MI's estimate of the total number of divisions in the west then stood at 50 identified and two unidentified.¹³⁰

Early in April, after further Anglo-US order of battle consultations, the German divisions were re-classified. Panzer and Panzer Grenadier divisions were placed in one category and the infantry divisions were divided into those capable of full service in mobile

* These were the first divisions, apart from 715th Infantry, to leave France since the beginning of the year. The crisis in Russia had already led to the withdrawal of 214th Infantry Division from Norway, which was reported by agents and followed by PR in February, and of 361st Division from Denmark in March; this move was detected by 27 March.¹²⁷

125. WO 208/3573 of 21 and 28 February, 6 and 13 March; WO 219/1939, Martian Report No 84 of 23 February; WO 219/1940, No 8606 8 March; AWL 1614 of 5 March.
126. AWL 1691 of 20 March; DEFE 3/36, KV 485 of 8 April; WO 219/1836, Nos 9 and 10 of 9 and 16 April 1944.
127. WO 208/3573 of 27 March 1944.
128. DEFE 3/36, KV 353 of 6 April; AWL 1837 of 11 April.
129. WO 205/532 of 23 April 1944.
130. WO 208/3573 of 10 April 1944.

operations (Field divisions), those capable only of defensive fighting (Static divisions) and an intermediate category of Limited Employment (LE) divisions.* In the middle of April it was estimated that there were ten Field divisions in the west, 33 Limited Employment divisions, including ten Reserve (training) Infantry divisions, and no Static divisions. Although it was thought that many of them were of recent formation, at an early stage of training, this represented an increase of seven Field divisions since January. It was known from captured documents, moreover, that five of the divisions still classed as Limited Employment (271st, 272nd, 275th, 276th and 277th Infantry) were to be organised on an offensive War Establishment. And it was believed that further infantry divisions were forming in France, probably of a new type with numbers below 100 and having only six battalions; Sigtint had recently reported that one such division – 84th Division – had arrived in Rouen from Poland.¹³²

By this time, as we have seen, it had been observed that some Field divisions were being moved closer to the coast and even into coastal sectors.† By 20 March there was already ‘an extraordinary assemblage’ of divisions in the Pas de Calais,¹³³ and the process was then detected in Brittany and Normandy. On 2 April it was

* The new classification, as issued as an appendix to a report by the CIC of 17 May,¹³¹ was as follows:

‘1. *Classification of German divisions* – A new system of classifying German divisions has been adopted, as it was found that the terms “offensive” and “defensive” were too rigid. Furthermore, the old system equated highly mobile divisions of great striking power, such as panzer divisions, with less mobile infantry divisions, much of whose transport is horse-drawn. Under the new system German divisions are classified into the following categories:–

- (a) *Panzer and panzer grenadier divisions*, including SS panzer and SS panzer grenadier divisions and also the Hermann Göring Panzer Division. Panzer and panzer grenadier divisions have been merged into one category, because each contains armour and is capable of great mobility.
- (b) *Field divisions*, including all other divisions intended for full service with the field armies in mobile operations, ie, the better-class infantry divisions, and all parachute, light and mountain divisions, and also SS divisions which have no armour.
- (c) L.E. (limited employment) divisions, including divisions intended for special purposes, such as occupation duties and training recruits; ie, the less mobile infantry divisions, L. of C. divisions, GAF infantry divisions, training divisions (panzer or infantry) and divisions composed of foreigners.
- (d) *Static divisions*, including divisions that are only capable of defensive fighting in the sectors which they were formed to hold; ie, coastal divisions in Norway, fortress divisions in South-Eastern Europe, and frontier guard divisions in Central Europe.’

† See above p 68.

131. CAB 121/394, CCS 454/6 of 17 May 1944.

132. WO 219/1836, No 8 of 2 April; DEFE 3/35, KV 156 of 3 April; AWL 1837 of 11 April; WO 219/1919, No 4 of 15 April; WO 208/3573 of 10 and 24 April 1944.

133. WO 219/1836, No 2 of 20 March 1944.

noted that the infantry divisions that had previously been inland 'lie close behind the northern seaboard, six in Flanders, Artois and Picardy, two in Normandy and one in Finisterre'.¹³⁴ By 15 April it was known that 353rd Infantry Division had moved up to the coast in Brittany, and on 17 April 243rd Infantry Division, classified as LE but believed, correctly, to have been made partly mobile, was firmly identified at the base of the Cotentin peninsula.^{135*}

This 'striking reinforcement of the coastal zone'¹³⁶ was accompanied by the discovery that 21st Panzer Division had been transferred from Mantes to Rennes, that 12th SS Panzer Division had moved from Antwerp to Evreux, the area vacated by 10th SS Panzer Division's transfer to Russia, and that 3rd Parachute Division was in a 'lay-back' position inland of Brest. On 6 April a high-grade decrypt stated that C-in-C West had brought 21st Panzer Division to Brittany; by 9 April agents had located it at Rennes; and by 19 April they had provided full details of its position, sixty miles across, in the Rennes area.¹³⁷ At the end of March the Enigma had disclosed that it had more than the normal one regiment of tanks.¹³⁸ That 12th SS Panzer was moving from Antwerp was reported by agents in the first week of April and confirmed by an Enigma reference to its Field Post Number on 18 April;† by 22 April it had been located in a wide area round Evreux.¹³⁹ Agents reported in the middle of April that 3rd Parachute Division had been in Brittany since mid-March.¹⁴⁰ As for the other formations included among the offensive divisions on 10 April – 2nd Panzer, the three Panzer Reserve divisions, 2nd SS Panzer and 17th SS PG – the following was learned about them by the end of the month.

2nd Panzer Division remained under close scrutiny by PR and

* 352nd Division also moved from St Lo to the *Omaha* beach, but this move was not detected, see below, p 150 and Appendix 14(ii).

† Field Post Numbers, which were referred to by many of the intelligence sources – by agents, POW and the German Press and radio as well as by Sigint – were of great importance in the reconstruction of the order of battle of the German armed forces, and particularly the Army, for the information they provided on locations and identifications. MI, MIRS and GC and CS collaborated in the work of associating the Field Post Numbers themselves with their respective units and formations, keeping a common register and exchanging solutions.

- 134. *ibid*, No 8 of 2 April 1944.
- 135. *ibid*, No 10 of 16 April; WO 219/1919, No 4 of 15 April; WO 208/3573 of 17 April 1944.
- 136. WO 219/1836, No 8 of 2 April 1944.
- 137. DEFE 3/36, KV 353 of 6 April; WO 219/1836, No 9 of 9 April; WO 219/1941, Martian Report No 92 of 19 April 1944.
- 138. AWL 1780 of 2 April 1944.
- 139. WO 219/1836, No 9 of 9 April; DEFE 3/40, KV 1333 of 18 April; WO 219/1919, No 5 of 22 April 1944.
- 140. WO 219/1836, No 10 of 16 April 1944; AWL 1876 of 18 April.

agents at Amiens, where it had been since arriving from Russia in January in a depleted state; but the observation of train movements indicated that it might have received one or two of its heavy tank battalions, and a decrypt of 20 April reported that it was receiving new equipment, including self-propelled artillery.¹⁴¹ The same decrypt mentioned that 2nd SS Panzer Division was being re-equipped, and agents had reported by mid-April that it had moved from Bordeaux to Toulouse.¹⁴² Beyond confirmation that it had not yet moved, and some evidence that its training was well advanced, nothing had been heard of 17th SS PG Division since February, when it was south of Tours.¹⁴³ But a good deal had been learned about the Reserve Panzer divisions. By mid-April, agents had located 155th at Nîmes, 179th in the Mantes area and 273rd near Bordeaux, and had reported that they were taking part in formation exercises and that Panther tanks had been sighted in their vicinity.¹⁴⁴ On 25 and 28 April decrypts of signals from C-in-C West disclosed that 9th Panzer Division was arriving to be merged with 155th into a new 9th Panzer Division, that 16th PG was arriving to be merged with 179th into a new 116th Panzer Division, and that a new Panzer division was also to be formed out of 273rd.^{145*} On the strength of an agent's report that notice boards for 9th Panzer, 16th PG and 10th PG Divisions had been seen at Vienna's main railway station it was assumed that the third division would be 10th PG until a further decrypt of 7 May revealed that 11th Panzer Division was returning from Russia to Bordeaux to form a new 11th Panzer Division with 273rd.^{147†}

Over and above this intelligence a decrypt of 12 April had referred to 2nd Parachute Division, then in Russia, and to two previously unidentified divisions – 5th Parachute Division and 91st Air Landing Division – as 'a reserve for any theatre of war'; and this implication that at least one more parachute division might arrive in the west was strengthened by a decrypt which had disclosed on 7 April that II Parachute Corps was moving from

* When 9th Panzer Division arrived from Russia Ultra disclosed that it came in only eight trains, viz with only 10 per cent of its normal strength.¹⁴⁶

† In the event the remnants of both 11th Panzer and 10th PG were amalgamated with 273rd to form a new 11th Panzer Division.¹⁴⁸

141. WO 219/1836, Nos 11 and 12 of 23 and 30 April 1944; DEFE 3/41, KV 1538 of 20 April.

142. WO 219/1919, No 4 of 15 April 1944.

143. DEFE 3/142, VL 7001 of 24 February; WO 219/1836, No 8 of 2 April 1944.

144. AWL 1837 of 11 April; WO 219/1836, Nos 9 and 10 of 9 and 16 April 1944.

145. DEFE 3/43, KV 2012 of 25 April; DEFE 3/44, KV 2295 of 28 April.

146. DEFE 3/47, KV 3183 of 8 May.

147. *ibid*, KV 3070 of 7 May; WO 219/1836, No 13 of 7 May 1944.

148. Müller-Hillebrand, *Das Heer*, Vol III (1969), p 308.

Ghent to Melun.¹⁴⁹ And by the end of the month it was recognised that III Flak Korps, which Sigint had identified in the west in February, constituted a formidable addition to enemy strength; in a paper issued on 30 April the JIC estimated that it might use some 300 heavy guns and 1,000 light guns in a dual purpose role.*

In this paper, summarising the latest intelligence on the German Army's order of battle, the JIC advised that the number of divisions opposing *Overlord*, then 53, would have risen to 55 by D-day. There would be 8 Panzer or PG, 14 Field and 33 LE; the enemy would also have III Flak Korps and independent artillery units and tank battalions. Four of the 8 Panzer-type (2nd Panzer, 21st Panzer, 12th SS Panzer and 17th SS PG) were first class and likely to be up to strength; but 2nd SS Panzer was unlikely to be up to strength, and the three Reserve Panzer divisions would not be complete and would hardly be the equivalent of two good divisions. No Panzer or PG division in a battle-worthy condition was likely to be transferred to the west before D-day, though the Hermann Göring Division was a possible exception. As for the Field divisions, 3rd Parachute Division would be up to strength and eleven infantry divisions would have the equipment and transport to make them capable of fighting in the front line; but only two (352nd and 353rd) were likely to be in an advanced stage of training, manning and equipment by D-day. To them should be added 5th Parachute Division and 91st Air Landing Division, though they needed several further weeks of training. It was unlikely that more than one or two other Field divisions would be created. The 33 LE divisions included ten Reserve (training) divisions and four GAF divisions; some of these might be up-graded to Field divisions, but no new LE divisions would be created. Assuming that the Panzer, PG and the three most powerful infantry-type divisions retained their present dispositions,† the JIC after some disagreement with the Washington JIC and much discussion with SHAEF and 21st Army Group, and with the warning that the calculation must be 'largely conjectural and becomes increasingly speculative in the later stages', gave the following assessment of the German rate of build-up from D-day:

* This was a large over-estimate, but III Flak Korps was to play an important part throughout the fighting in Normandy.

† As given in the JIC paper, these were 12th SS Panzer (Evreux), 21st Panzer (Rennes), 17th SS PG (Thouars, south of Tours), 2nd Panzer (Amiens), 2nd SS Panzer (Toulouse), 273rd Reserve Panzer (Libourne, near Bordeaux), 179th Reserve Panzer (Mantes), 155th Reserve Panzer (Nîmes), 3rd Parachute (Brest), 352nd Infantry (St Lo), 353rd Infantry (Brittany).

149. DEFE 3/36, KV 456 of 7 April; DEFE 3/38, KV 828 of 12 April.

D-day morning:	Three LE divisions plus Flak and artillery.
D-day evening to D+1:	Two Panzer divisions, one Field division, four LE divisions.
D+1 to D+2:	Four Panzer divisions, seven Field divisions, four LE divisions.
D+3 to D+7:	Seven Panzer divisions, seven Field divisions, four LE divisions.

The JIC believed that the only transfers from other theatres after D-day would be two divisions from Italy by about D+20 and two from Scandinavia by about D+25.¹⁵⁰

At least in relation to the identity and location of the armoured divisions, the accuracy of the intelligence in this paper was confirmed in striking fashion on 2 May, when the decrypt of a Fish signal of the middle of April gave the time-table for a tour by Guderian, Inspector General of Panzer Troops. It disclosed that he was to inspect 2nd Panzer Division at Amiens on 28 April, 12th SS Panzer at Evreux on 29 April, 21st Panzer at Rennes on 1 May, 17th SS PG at Thouars on 2 May, 273rd Reserve Panzer (10th Panzer) at Libourne on 3 May, 2nd SS Panzer at Montauban on 4 May, 155th Reserve Panzer (9th Panzer) at Nîmes on 6 May and 179th Reserve Panzer (116th Panzer) at Paris/Melun on 8 May.^{151*} But by the beginning of May other decrypts were undermining the assumption that there would be no further increase in the offensive divisions and no change in their dispositions.

The most valuable of these, an order from Jodl of 26 April, was

* The decrypt also disclosed that he was to inspect at Mailly on 24 and 25 April Abteilung 654 (known to be a heavy anti-tank battalion), an unidentified non-divisional battalion and the Panzer regiments of the following divisions: Grossdeutschland Panzer, 3rd SS Panzer. These divisions were known to be in Russia, but regiments from Russia were often at Mailly for the purpose of converting to Panther tanks. Although it had long been known that Mailly was one of the two most important armoured depots in the west, it is probably safe to assume that the decrypt prompted the heavy raid by Bomber Command on Mailly on 3 May; Mailly had become an important target with the approach of D-day, especially as the JIC had concluded during April that the detached battalions refitting there would be used for the crash conversion of the Reserve Panzer divisions or in operations against the Allied landings.¹⁵² In a signal of 8 May, decrypted on 14 May, C-in-C West reported that the raid had caused much damage to buildings and heavy casualties, but that damage to material had been 'relatively light owing to dispersal'.¹⁵³ It had been carried out by 362 bombers, of which 42 were lost.¹⁵⁴

150. CAB 121/394, JIC(44)176 of 30 April; CCS 454/5 of 16 April 1944.

151. DEFE 3/45, KV 2624 of 2 May.

152. CAB 121/394, JIC(44)176 of 30 April; AWL 1904 of 24 April.

153. DEFE 3/155, KV 3763 of 14 May.

154. Webster and Frankland, *The Strategic Air Offensive against Germany*, Vol III (1961), pp 137, 156.

decrypted on 29 April. It specified that certain formations had been set up as an OKW reserve which was to be moved and employed only with OKW's permission:¹⁵⁵

- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. West | I SS Panzer Corps with 1st and 12th SS Panzer, 17th SS PG Division and Panzer Lehr Division 'when brought up'.* |
| 2. Italy | Hermann Göring Division. |
| 3. South-East | 42nd Jäger Division and 1st Mountain Division 'when brought up'. |
| 4. Hungary | 16th and 18th SS PG Divisions and 8th SS Cavalry Division. |
| 5. Denmark | 20th GAF Field Division. |
| 6. Home Area | Parachute Regiment 6, coupled with air transport space earmarked for 91st Air Landing Division and Werfer (ie. multi-barrelled mortar) Brigades 7 and 8.† |

This decrypt gave a firm indication that 1st SS Panzer Division and Panzer Lehr were to be brought into the west. It suggested that reinforcements for the west from the OKW reserve might also be drawn from the Hermann Göring Division; possibly from Parachute Regiment 6, the two Werfer Brigades and 91st Air Landing Division (as an infantry division); and from the five divisions in the south-east and Hungary if they were not needed for Russia.¹⁵⁹ It gave no clue as to when the reinforcements would arrive. But it was not long before Sigint rectified this omission. On 8 May the decrypt of a signal from C-in-C West dated 4 May disclosed the recent arrival in France of Panzer Lehr, and ground reports subsequently added that it had arrived via Orléans and was located at Chartres.¹⁶⁰ The same decrypt announced that 91st

* Ultra had first identified Panzer Lehr at the end of March, reporting its arrival in Hungary.¹⁵⁶ It was thought, correctly, to be an assemblage of high-quality instructional units. It had remained in Budapest throughout April but the decrypts had continued to refer to it as being associated with C-in-C West.¹⁵⁷

† A further decrypt of 5 May disclosed that Hitler had ordered the immediate transfer of Werfer Brigade 7 to C-in-C West.¹⁵⁸

155. DEFE 3/44, KV 2388 of 29 April.
156. DEFE 3/765, VL 9838 of 30 March; WO 219/1836, No 8 of 2 April; WO 219/1919, No 3 of 8 April 1944.
157. eg DEFE 3/43, KV 2189 of 27 April.
158. DEFE 3/46, KV 2873 of 5 May.
159. AWL 1949 of 2 May.
160. DEFE 3/47, KV 3183 of 8 May; AWL 2019 of 15 May; WO 205/532, of 14 May 1944.

Infantry Division had arrived in 'the west coast area'; and on 15 May Sigint located the division at Redon, between St Nazaire and Rennes.¹⁶¹ The presence in the west of 1st SS Panzer Division (Leibstandarte Adolf Hitler), was finally confirmed on 20 May, when Sigint located it in Belgium.^{162*}

No less disturbing than the evidence of these arrivals was the discovery that the Germans were re-disposing their forces in the west to strengthen their position in the *Overlord* area. The decrypt about Guderian's tour had placed 21st Panzer at Rennes in the middle of April.† By then, however, reports of train movements were suggesting that a smallish division was moving from Caen to the St Malo area and being replaced by an armoured formation.¹⁶⁹ On 15 May a decrypt identified the small division as 77th Infantry, a new Field division which had been forming south of Caen, and confirmed recent ground reports that it had been replaced in the Caen area by 21st Panzer Division.¹⁷⁰ As the decrypt stated only that the remaining elements of the division had arrived, without giving its new area, MI 14 and SHAEF hesitated before finally accepting on 21 May that it was in the Caen area.¹⁷¹ 21st Army

* The delay in finally accepting the arrival of 1st SS Panzer provides a good illustration of the complex nature of order of battle intelligence. There were rumours of its arrival in April¹⁶³ and, as noted above, it was included in OKW Reserve for the west in the decrypt of 29 April. By 1 May the decrypts had suggested it might be arriving by disclosing that I SS Panzer Corps, to which it was subordinate, was moving with its Corps troops, including its Tiger tank battalion, SS Panzer Abteilung 101, from Brussels to (possibly) Alençon;¹⁶⁴ but in mid-April the Russians had reported that the division was still on the eastern front and there was still no evidence of a large-scale train movement.¹⁶⁵ Decrypts of 3 and 5 May disclosing that elements of the division were at the SS Panzer depot at Tournhout near Antwerp persuaded 21st Army Group that the whole division had arrived,¹⁶⁶ but MI 14 remained sceptical as late as 15 May: the Russians had reported that most of the division was still on the eastern front on 2 May, and though agents had now reported train movements through Holland during April, these movements did not appear to be on a sufficient scale.¹⁶⁷ On 22 May MI 14 accepted that the division had been transferred, but believed it was well below strength.¹⁶⁸

† See above, p 78.

161. DEFE 3/47, KV 3183 of 8 May; DEFE 3/155, KV 3892 of 15 May.

162. DEFE 3/158, KV 4608 of 20 May.

163. WO 205/532, of 25 April 1944.

164. ibid, of 30 April; DEFE 3/42, KV 1891 of 24 April; DEFE 3/43, KV 2012 of 25 April; AWL 1939 of 1 May.

165. AWL 1948 of 2 May.

166. DEFE 3/45, KV 2700 of 3 May; DEFE 3/46, KV 2960 of 5 May; WO 205/532, of 7 May 1944.

167. WO 208/3573 of 15 May 1944; AWL 2020 of 15 May.

168. AWL 2058 of 22 May.

169. WO 219/1836 of 7 May 1944.

170. ibid of 14 May; DEFE 3/155, KV 3892 of 15 May; AWLs 2019 and 2020 of 15 May.

171. WO 219/1842, Martian Report No 96 of 17 May; WO 219/1836, No 9 of 20 May; WO 208/3573 of 22 May 1944.

Group had no reservations; as early as 14 May, indeed, it had concluded on the basis of reports of tracks and tank carriers that 'the division is now close to Caen with its tanks apparently east of the Orne. The exact area of the division and its dispositions are not known, but on any reckoning it now lies but a short run from the eastern beaches of the *Neptune* area'.¹⁷²

In the same report 21st Army Group had noted that there was evidence for 'a drastic red disposition of enemy armour. . . . The Pas de Calais and the mouth of the Seine were stiff with infantry, while it is to the area between the Seine and the Loire that his armour has been coming'. This appreciation was much influenced by the fact that, over and above the information about 21st Panzer, 'a good report' received on 10 May had stated that 17th SS PG was moving from Thouars to Rennes and that 1st SS Panzer was leaving Antwerp to replace 17th SS PG at Thouars.¹⁷³ Not till 24 and 25 May did a further agent's report and (in the case of 17th SS PG) a decrypt prove that this 'good report' had been inaccurate.¹⁷⁴ By 15 May, however, there was some evidence that 5th Parachute Division had replaced 21st Panzer at Rennes;¹⁷⁵ several decrypts had reported the setting-up of this division in April and had located it at Nancy¹⁷⁶ and in the first week of May another decrypt disclosed that elements of 4th Parachute Division from Italy were to be sent – presumably as cadres – to strengthen 5th Parachute Division forming at Rennes.¹⁷⁷ On 26 May the presence of 5th Parachute in the Rennes area was mentioned in the decrypt of a signal reporting the arrival of reinforcements for the Cotentin peninsula.¹⁷⁸

Ground reports of train movements had indicated by 21 May that some reinforcement of the Cotentin was taking place. We have already seen that, coming on top of the re-disposition of 21st Panzer and the location of Panzer Lehr, this news prompted the JIC on 22 May to wonder whether the enemy had concluded that the Le Havre–Cherbourg area would be 'a likely, and perhaps the main point of assault'.* It was followed by decrypts issued on 24, 25 and 27 May of Fish signals, dating from the middle of the month, which reported the completion of a considerable reinforcement of the Cotentin and gave exceptionally full details of

* See above, p 61.

172. WO 219/1836, of 14 May 1944.

173. WO 219/1942, Martian Report No 95 of 10 May 1944, No 96 of 17 May.

174. *ibid*, No 97 of 24 May; DEFE 3/160, KV 5189 of 25 May.

175. WO 208/3573 of 15 May 1944.

176. DEFE 3/40, KV 1339 of 18 April.

177. DEFE 3/47, KV 3184 of 8 May.

178. DEFE 3/161, KV 5320 of 26 May.

the locations, boundaries and subordinations of the formations involved.^{179*}

□

These disclosures, together with evidence from Sigint and the other sources that some divisions were still being up-graded and new ones formed in the west, required frequent upward revisions during May of the estimates of the total number of divisions available under C-in-C West's command. At the end of April, when the JIC had estimated that *Overlord* would be opposed by 55 divisions – 8 Panzer and PG; 14 Field and 33 LE – it had believed that the enemy would maintain C-in-C West's strength at that level, and that, if forced to transfer divisions to Russia, he would replace them with newly-formed or battered divisions.¹⁸⁰ By 13 May the number of divisions already identified had risen to 56 and the JIC had raised its estimate for D-day to 60. It had also revised its estimate of the number that could be transferred to France in the two months after D-day. On 30 April it had believed that these would be limited to two from Scandinavia and two from Italy; on 13 May, though continuing to insist that no divisions would be released from Russia, it thought that one or two could arrive from Denmark, two or three from Norway, and two from Italy and, possibly, two from the Balkans and a few newly-formed divisions from Germany and Poland. Nor did it exclude the prospect that should the situation become critical on the eastern or the western fronts, Germany might withdraw in Italy and the Balkans to enable her to release a further four divisions from each of these theatres. To account for this last revision the JIC referred to the lull on the eastern front, to Germany's improved position in Hungary and Romania and to the probability that with the start of the Allied offensive against the *Gustav* line in Italy she would down-grade the threat of an Allied landing in the eastern Mediterranean.¹⁸¹

On 16 May the Chiefs of Staff believed that the number of additional divisions Germany might bring in by D+60 would not exceed thirteen. And as for the number she would have available by D-day, the CIGS was satisfied that when allowance was made for 'the revised method of assessing and classifying German

* See Appendix 9 for these details and for the effects of this intelligence on US First Army's operational plans.

179. WO 205/532 of 21 May; DEFE 3/160, KV 5081 and 5158 of 24 and 25 May; DEFE 3/161, KV 5416 of 27 May; WO 208/3573 of 29 May 1944.

180. CAB 121/394, JIC(44)176 of 30 April.

181. *ibid*, JIC(44)198 of 13 May.

strengths, it appeared that enemy opposition to *Overlord* fell within the limits previously agreed as being the maximum under which the operation could be launched'. In order to reassure themselves on this score, however, the Chiefs of Staff asked that the latest estimate of the scale of opposition should be assessed on the old classification, in terms of full-strength, first-quality divisions.¹⁸² This was done by MI 14, which relied on a considerable amount of recent intelligence, much of it provided by Fish decrypts and giving detailed strength returns,* to work out that the offensive divisions (that is, the Panzer and PG divisions, of which ten had now been located, and those of the Field divisions that were not holding coastal sectors) were the equivalent of between twelve and sixteen full-strength, first-quality divisions.

On 20 May MI 14's re-evaluation was incorporated into a draft minute for the Prime Minister. On 23 May this draft was approved by the Chiefs of Staff who, briefed by the DMO, added a further paragraph (paragraph 10) before forwarding it with the suggestion that the Prime Minister might send it to Stalin once the date of D-day had been fixed.¹⁸³ The relevant paragraphs read as follows:

'Land Forces'

7. We estimate that, on the target date of OVERLORD, the Germans will have six to seven full-strength, first-quality divisions in reserve in France and the Low Countries. They will also have in reserve some eleven to fourteen offensive divisions of rather lower quality, roughly equivalent to some six to nine full-strength, first-quality divisions. Instead of twelve full-strength, first-quality divisions in reserve, as stipulated by COSSAC, there will thus be a total of seventeen to twenty-one offensive divisions which will be the equivalent of some twelve to sixteen full-strength first-quality divisions.

8. During the first two months it is unlikely that the Germans will be able to transfer any divisions from the Russian front to the West, but they may make available, from elsewhere, for use against OVERLORD, some five to seven divisions of varying strength and quality. Dependent on the course of events on the Russian and Italian fronts, and at the cost of major withdrawals in the Mediterranean theatre, a further six divisions, at the most, might also be brought against OVERLORD. This represents a maximum of thirteen divisions which might be brought against

* See Appendix 10 (i).

182. *ibid*, COS(44)158th(o) Meeting of 16 May.

183. *ibid*, COS(44)167th(o) Meeting of 23 May.

OVERLORD, as compared with the maximum of fifteen which COSSAC considered acceptable.

9. In the following table we compare the build-up in equivalent full-strength, first-quality divisions, which, according to COSSAC's conditions, should not be exceeded, with that which we now believe the Germans might achieve. Our estimate makes no allowance for interference by air or airborne attack or by sabotage.

<i>Time</i>	<i>German build-up</i>	
	<i>Maximum build-up acceptable to COSSAC</i>	<i>Present Estimate</i>
By D Day	3	3
D+2	5	6-7
D+8	9	11-14

10. It should be noted, however, that since COSSAC laid down his conditions in his appreciation of 30 July 1943, the OVERLORD Plan has been revised with the object of increasing the breadth and weight of the initial assault, ensuring the earlier capture of a deep water port, and improving the rate of our build-up. These factors, together with the reduction in the likely rate of German reinforcements against OVERLORD in the first two months of the operation, should in some measure compensate for the present increase in German opposition during the initial stage of the operation.*

These conclusions may be compared with those of the review by the Combined Intelligence Committee for the Combined Chiefs of Staff of 'Conditions in Europe', issued on 17 May, and based on intelligence up to 10 May. This accepted the JIC's estimate that there would be 60 divisions in the west on D-day, but set a slightly higher estimate of the enemy's rate of build-up: his main counter-attack would be made about D+7 with seven Panzer and PG and seven Field divisions.¹⁸⁴

The JIC's final report in the series entitled 'Periodic Review of Conditions in Europe and the Scale of Opposition to *Overlord*' followed on 25 May.¹⁸⁵ The number of divisions located in the

* See Appendix 10 (ii, iii and iv) for MI 14's reassessment, for the full text of the memorandum and for the DMO's brief. There is no record that the memorandum was sent to Moscow. The memorandum referred to the exchanges on 20 October 1943 (see above, p 8) at the Moscow conference, when Marshal Voroshilov had enquired what the Allies would do if Germany had more than twelve good divisions in France and the Low Countries and had been told that, as the estimate of twelve was an approximation, it might be thought that the invasion had a reasonable prospect of success against thirteen or fourteen good divisions.

184. *ibid*, CIC 454/6 of 17 May 1944.

185. *ibid*, JIC(44)215(o) of 25 May.

west was then 59 – 10 Panzer and PG, 14 Field, 34 LE and one unidentified but probably LE – as compared with 53 on 30 April. The JIC believed that the number might be raised to 62 by D-day, as compared with its estimate of 55 on 30 April, by the arrival of one armoured and two Field divisions.* As for the enemy build-up against the landings, the JIC thought the Allies would encounter three LE divisions, elements of 21st Panzer Division and one Field Division (352nd Infantry) in the forenoon of D-day but that they would be joined by last light by the whole of 21st Panzer Division, elements of a second armoured division (12th SS Panzer), one Field Division (91st Infantry) and three more LE divisions; and that D+1 would see the arrival of two other armoured formations (Panzer Lehr and 17th SS PG). Between D+7 and D+25, the period in which the enemy was most likely to attempt a large-scale counter-attack, the Germans would be able to assemble ten or eleven Panzer and PG divisions, between eleven and thirteen Field divisions and eight LE divisions. But the forces actually available would have been reduced by battle casualties since D-day, by air attack and sabotage against the movement of mobile divisions and by the difficulty of bringing non-mobile divisions up to the bridgehead; and the damage already done to rail communications was such that the LE divisions and most of the Field divisions would be wholly dependent on improvised road transport.

¶ The strength of the counter-attack would also depend on the quality of the divisions, and the JIC paper offered an assessment of the state of every division.† But it noted that the available intelligence was variable in extent and reliability, and uncertainty on this subject continued to be a major source of anxiety down to D-day. On 30 May the CIGS asked whether further information about the quality of the listed divisions could be provided so that it could be compared with the original limits laid down by COSSAC. The DMI pointed out that although it was known that some of the Field divisions were recently converted training divisions, very much under strength, and that some of the Panzer and PG divisions had been re-formed from battered formations and were not yet operational, the state of individual divisions could not be assessed with any greater precision.¹⁸⁶

* As for the possible further increase from 59 to 62, the paper in fact chose to add three from a list of seven divisions which might arrive before D-day (see Appendix 10 (v)). This probably indicates an anxiety to err on the safe side, if at all, since MI 14 did not normally agree to the inclusion in such estimates of divisions of which it was uncertain. On the other hand, it is a tribute to the accuracy of its work that, as we shall see, it was able to eliminate four of the seven before D-day and that two of the remainder moved to Normandy soon after.

† See Appendix 10 (vi).

186. *ibid*, COS(44)175th(o) Meeting, 30 May.

Estimating the scale on which reinforcements might reach the west in the two months after D-day, the JIC's final paper repeated the assessment it had made on 13 May. Between five and seven divisions might be sent from Scandinavia, Italy and the Balkans, and possibly a few newly-formed divisions from Germany and Poland. Should the situation become critical for Germany in Russia or the west, she might find a further seven for either or both of these fronts by withdrawing in Italy and the Balkans; but no battle-worthy divisions would be transferred to the west from Russia. The paper added that not even battered divisions would be transferred from Russia if Russia went over to the offensive concurrently with *Overlord*.*

Additions to Allied intelligence about the Army order of battle were still being made in the few days before D-day. By 28 May Sigint had reported that the Hermann Göring Division was moving from Leghorn to the Italian front, thus establishing that it would not appear in France in the early stages of *Overlord*.¹⁸⁹ On 29 May MI 14 tentatively placed II Parachute Corps at Rennes, a decrypt of 26 May having reported that it was moving forward from Melun.¹⁹⁰ On 5 June reference in decrypts to Field Post numbers disclosed that XLVII Panzer Corps was being brought in from Russia, and associated it with the reinforcements recently sent to the Cotentin.¹⁹¹ These and other less important disclosures† were either too late or too tentative to be included in the order of battle lists and maps that were issued to the Allied forces but they enabled MI 14 and 21st Army Group to arrive at final

* In the absence of any hint from the Russians, uncertainty as to when they would carry out their promised offensive added to Whitehall's anxieties. In a search for clues MI 14 had scrutinised the Sigint, particularly the decrypts of signals in the German Y Service key (Mustard). Its report, issued on 25 May, found that while the Germans were reporting Russian preparations for an offensive, it was not possible on their evidence to forecast the date.¹⁸⁷ By 18 June, however, the Russians had advised the Allies that following a first attack in one sector about the middle of June their operations would develop at the end of June into a general offensive.¹⁸⁸

† These included the news that 245th Infantry Division had arrived in France;¹⁹² the fact that 156th, 171st and 191st Reserve Divisions on the coast in the Pas de Calais had been converted to Field Divisions (47th, 48th and 49th Infantry Divisions);¹⁹³ and confirmation that the division which had recently moved to St Malo was 77th Infantry Division.¹⁹⁴

- 187. WO 208/4312, Report of 25 May 1944 on 'The Russian Plan for Summer 1944'.
- 188. WO 208/3573 of 18 June 1944.
- 189. WO 205/532 of 28 May 1944.
- 190. DEFE 3/161, KV 5320 of 26 May; WO 208/3573 of 29 May 1944.
- 191. DEFE 3/166, KV 6506 of 5 June.
- 192. DEFE 3/161, KV 5359 of 27 May.
- 193. WO 208/3573 of 29 May; AWL 2106 of 29 May.
- 194. AWL 2178 of 5 June.

estimates of the number, identification and location of the enemy's land forces on D-day that were remarkably close to the facts.

On 4 June 21st Army Group's assessment of the total number of divisions in the west was 59 identified plus two (245th Infantry and 6th Parachute) unconfirmed. On 5 June MI 14, which believed that 6th Parachute was still forming in central France, gave the total as 60, of which two were unidentified; and it was soon to emerge that the two unidentified were already among the 58 identified.* These estimates may be compared with the figure derived from German records. This is 60, but it may be amended to 58 because it includes two divisions (2nd Parachute and 19th Panzer) which, though about to leave for the west, did not do so before D-day. As for the locations, comparison of the German and Allied maps show that the Allied estimates were almost equally accurate.¹⁹⁶† As we shall see, however, the intelligence on the location of two formations that were to play a critical role on D-day – 21st Panzer and 352nd Infantry – was either insufficiently precise or not spelled out with sufficient emphasis when relayed to the Commands.



In his signals reporting on his tour of northern France, decrypted early in May, the Japanese Naval Attaché repeated that as it was Rommel's policy to destroy the Allies 'near the coast, most of all on the beaches', the strengthening of the coastal defences, like the movement of troops to the coastal sector, had been 'particularly noticeable since he had taken command.'‡ The details given in his report filled some gaps in Allied knowledge of the enemy's coast defence preparations but were chiefly valuable for confirming what the Allies had learned since February, the month in which they detected that the Germans were adopting new measures, notably the laying of underwater obstacles and the erection of obstacles against airborne landings, as well as intensify-

* 245th Infantry, which MI 14 had located at St Lo, had in fact gone to Dieppe, where MI 14 had located an unidentified division.¹⁹⁵ It thus appeared on maps for a time both as 245th in western Normandy and as an unidentified division at Dieppe. The other unidentified division was later to be identified as 189th Reserve, which already appeared in the identified list of 5 June.

† See maps facing p 101.

‡ See above, pp 67–68 and Appendix 7.

195. AWL 2106 of 29 May; WO 208/3573 of 29 May; WO 205/532 of 4 June 1944.
196. WO 205/532 of 4 June; WO 208/3573 of 5 June 1944; Müller-Hillebrand, *op cit*, Vol III, p 144.

ing the construction of fixed defences, the inundation of coastal areas and defensive sea-minelaying.

In a Press interview in February Rundstedt stated that, together with a wide mined belt, lines of underwater obstacles on the beaches would create great difficulties for the Allies in the initial phase of a landing.¹⁹⁷ From 20 February PR detected such obstacles, which had previously been noted in small numbers only at Quinéville,* on many beaches, beginning with those in the *Neptune* assault area but eventually including practically every good beach in France and Belgium.¹⁹⁸ They were not yet being laid lower than about 100 yards below the high-water mark, but in view of the necessity of landing below them, the danger that they would be extended down to the low-water line created prolonged anxiety about the time set for H-hour. On 6 May General Eisenhower described the underwater obstacles as 'one of the worst problems of these days'.¹⁹⁹ Nor was it until 8 May that, in the light of PR showing the precise positions of the obstacles laid by then, the Allies felt able to take the difficult decision to stand by their original intention to land at half-flood on the day when that came at forty minutes after nautical twilight (that is 5 June with postponement acceptable to 6 and 7 June).²⁰⁰

We now know that only lack of time and shortage of manpower and materials prevented the Germans from extending these obstacles down to the low-water line, as they planned to do.²⁰¹ Even so, the fact that it was imperative to remove or destroy in advance of the first assault wave those they were laying necessitated the training of large numbers of Royal Engineers and naval personnel and the provision of special craft and equipment. For these purposes, moreover, it was not enough to pin-point the location of the obstacles. This could be done by the vertical photography flights of the normal PR squadrons which had previously carried out other essential work, including the photographing of every beach at every stage of the tide to provide the basis for the all-important need to estimate the beach gradients. It was essential, also, to determine the nature of the obstacles. The decrypt of a signal from the Japanese Military Attaché in Vichy provided some technical details about them on 21 March.²⁰² But

* See above, p 17.

197. WO 205/532, No 2 of 20 February 1944.

198. WO 219/1939, Martian Report No 84 of 21 February; WO 219/1940, ibid, No 85 of 1 March; ADM 223/120, NID UC Report No 434 of 26 February 1944.

199. Harrison, op cit, p 177n.

200. CAB 44/242, p 262, quoting ANCXF Report Vol 1, p 9.

201. Harrison, op cit, pp 264–265.

202. AWL 1706 of 22 March.

more information was needed – a continuous watch, indeed, as was illustrated at the end of April when a bombing attack on coastal batteries detonated a series of mines which, it emerged, had been attached to stakes set between the obstacles.²⁰³ It was obtained by Lightnings of the USAAF which, flying daily until D-day along the lines of obstacles at zero feet, took oblique photographs with a new moving camera. Low-level oblique photography, an outstandingly important development in PR which also proved invaluable for coverage of the other fixed defences and of the V-weapons sites, was supplemented by the physical examinations carried out by the Combined Operations Pilotage Parties.²⁰⁴

At the turn of 1943–1944 Combined Operations Pilotage Parties (COPP) carried out small reconnaissance operations off the French coast. To conceal the intended landing area these parties worked in the Dover Straits and the Channel Islands as well as on the Normandy coast. Some parties remained offshore to investigate the tides, but the most remarkable work was carried out by men landed from the midget submarine X-20 whose main task was to investigate patches of soft peat and clay mentioned by a French guidebook as occurring on certain beaches but who also brought back information about beach gradients, inundations and defences. The intelligence brought back by this party led to experiments off the Norfolk coast, where similar conditions obtained, and the devising of counter-measures.²⁰⁵ In May 1944, in Operation *Tarbrush*, four similar landings were made in the Pas de Calais with the object of investigating outer beach obstacles and, in particular, the types of mine attached to them.

Inundations and obstacles against airborne landings presented further problems. The inundations were under PR observation from the beginning of 1944, and an enormous effort was devoted to plotting them as they were extended in the Low Countries and northern France, even though only those behind Courseulles and around the river Dives and those at the base of the Cotentin peninsula and on its east coast directly affected the *Overlord* plans.²⁰⁶ As a final coastal defence measure Rommel ordered the staking of all fields suitable for glider landings. This was at the

203. WO 219/1836, No 12 of 30 April; WO 219/1942, Martian Report No 94 of 3 May 1944.

204. Saunders, *The RAF 1939–1945*, Vol III (1954), p 93; Ellis, op cit, Vol I, p 116; De Guingand, *Operation Victory* (1947), p 366; Haswell, *The Intelligence and Deception of the D-day Landings* (1979), p 93; CAB 44/242, pp 165–166; AIR 41/7, *Photographic Reconnaissance*, Vol II, p 144.

205. Roskill, *The War at Sea*, Vol III Part 2 (1961), pp 11–12; McLachlan, *Room 39* (1968), pp 331–332; De Guingand, op cit, p 366; Haswell, op cit, pp 93–94.

206. CAB 44/242, p 209; D'Este, *Decision in Normandy*, (1983) p 154.

time of the heightened fear of airborne landings which produced in May the reinforcement of the Cotentin by additional ground forces to deal with this threat.* The work was started in Brittany and Normandy, areas which the Germans judged to be favourable for diversionary and subsidiary landings, and was soon detected.²⁰⁷ On 30 April 21st Army Group observed that, in the wake of Rommel's tour of Seventh Army's area, fields suitable for airborne landings up to ten miles inland were rapidly being staked and wired.²⁰⁸ On 7 May it noted that Rommel had publicly drawn attention to the need for fending off airborne landings.²⁰⁹ In his important appreciation of the following day, decrypted on 13 May,† C-in-C West stated that the development of field works and outer beach obstacles, and the staking of ground against air landings, were being driven forward with all available labour. The importance the Germans were attaching to such defence was confirmed by a decrypt of 31 May in which Luftflotte 3 issued instructions for repelling airborne landings.²¹⁰

The Allies could do little to circumvent or mitigate the hazards created by this last-minute development. For at least one airborne landing made subsequent to the seaborne assault – that of 6th Airlanding Brigade at St Aubin on the afternoon of D-day – plans were made for Royal Engineers to cut the posts beforehand, but this proved impossible and in the event the gliders either sheared off the poles or lost their wings in landing.²¹¹

As well as having to be assembled and assessed for the operational and intelligence staffs by the Theatre Intelligence Section (TIS), which gave particular attention to the underwater obstacles in daily reports issued from the spring of 1944, information on the coastal defences had to be reproduced on charts, maps and coastal silhouettes by mid-April for distribution to the troops and ships. This labour was undertaken by the ISTD with assistance from the Hydrographer of the Navy; it used up large resources, including one million photographs, and as Germany's preparations showed no sign of slowing down, it had to be reinforced by a procedure for issuing amendments right up to D-day.²¹² A final report on the fixed defences for the Combined Chiefs of Staffs, issued on 17 May, pointed out that while their

* See Appendix 9.

† See Appendix 8.

207. Harrison, *op cit*, p 250.

208. WO 205/532, of 30 April 1944.

209. *ibid*, of 7 May 1944.

210. DEFE 3/163, KV 5956 of 1 June.

211. D'Este, *op cit*, p 136.

212. Ellis, *op cit*, Vol 1, p 176; ADM 223/287, Gonin report on *Overlord*.

pattern was settled, detailed additions and improvements were still being made.²¹³



Concurrently with the intensification of work on the coastal and beach defences the German Navy made a start with an extended programme of defensive minelaying.²¹⁴ Largely with the assistance of Sigint, though not without much tedious analysis of it by the OIC and GC and CS, the programme was reconstructed in considerable detail – a fact which proved to be of crucial importance for the success of the landings.

Much of the defensive mining was carried out in deep waters. General evidence about it was derived from Enigma decrypts disclosing that minelaying sorties were taking place or, more frequently, from decrypts which were less explicit but showed that naval units known to be equipped for minelaying had taken an undue length of time to complete a voyage. The interpretation of such decrypts was often assisted by PR. More specific information as to where mines had been laid was provided by decrypts announcing that a swept channel had been closed or diverted. The usefulness of these decrypts depended entirely on the fact that the positions of the swept channels had been identified by means of the patient study of information gleaned from Enigma and other sources since the early stages of the war. 'By July 1943 an inshore route had been established from Cherbourg to Dunkirk, and by the beginning of 1944 the inner and outer swept channels were known . . . with a fair degree of accuracy . . .'²¹⁵ It was on the strength of the previous study and the arrival of new evidence that the OIC was able on 21 February to give the first warning that the German torpedo-boats had begun laying a major barrage in the Seine Bay, or to the eastward of it, at the end of January, and that the enemy had since established a safety margin to seaward of the inner swept channel between Le Havre and Cherbourg, routeing all traffic through this channel and confining minesweeping in the Bay to the channel.²¹⁶ Between the end of February and 24 May a further 22 possible minelaying sorties by torpedo-boats, E-boats and minesweepers from Cherbourg, Le Havre and St Malo were detected.^{217*}

* See 'Use of Special Intelligence during Operation *Neptune*' (in ADM 223/287) for a detailed account of all that was learned from Sigint about German operations in the Channel area from January to September 1944. See Volume III Part 1, p 287 for operations by British destroyers and MTBs against these sorties in association with their attacks on German convoys.

^{213.} CAB 121/394, CCS 454/6 of 17 May 1944, Appendix D.

^{214.} ADM 223/267, USION, p 3. ^{215.} *ibid*, p 13.

^{216.} *ibid*, p 4. ^{217.} *ibid*, p 4.

A second type of defensive activity, inshore minelaying and the laying of underwater obstacles by R-boats, converted landing craft and minesweeping trawlers, was also first detected in February. It was kept under observation with the aid of PR, R/T intercepts at the coastal Y stations, Enigma decrypts, and decrypts of a form of German W/T traffic first intercepted in October 1943. Called 'PP', it consisted of easily decoded ship-to-ship signals of a tactical nature and was heard from most parts of the coast from Flushing to Bordeaux. The PP traffic disclosed in mid-March that an experimental barrage had been laid off Ouistreham. But inshore operations were only occasionally detected in the Seine Bay before April.²¹⁸

In the first week of April the OIC believed that except for the Ouistreham barrage none of the inshore or offshore mining had taken place in the Seine Bay south of 49° 30' N (roughly on the line from Le Havre to Marcouf). But it had found it difficult to distinguish between inshore minelaying and the laying of underwater obstacles from ships, and it recognised that intelligence about the offshore lays remained scanty.²¹⁹ The intelligence situation was soon to change.

By the end of April a general upsurge of inshore activity was known from PP and R/T traffic to have included two complex operations by specially assembled groups of LCT IIIIs (heavily armed landing craft) on the banks south of St Vaast (the Banc de la Rade, the Banc de St Marcouf and the Banc du Cardonnet) at the northern end of what the Allies knew as *Utah* beach, across the 'boat-lane' selected for the approach of the assault force. Enigma decrypts provided unusually full details of the position of the minefield laid in these operations; they were issued to Ultra recipients by the OIC on 1 May.^{220*}

Some of these decrypts formed part of a series of Offizier Enigma signals addressed to all holders of the keyword Schranke (barrage). Between 19 and 30 April, as well as confirming the closure area of the Cardonnet bank, they gave details in terms of

* These were the only inshore mines laid in the Seine Bay. Captain Heinz Bonatz, head of the B-Dienst, has explained that though Rommel pressed for more inshore mining, the naval authorities believed the beaches there were adequately protected by sandbanks and reefs.²²¹ The decision to make an exception for the area of St Vaast was presumably associated with the other measures taken to strengthen the defences in the Cotentin (see Appendix 9) but there is no evidence that the location was decided by anything but topographic and operational calculations.

218. *ibid*, pp 25, 49–68.

219. ADM 223/172, OIC SI 908 of 8 April 1944.

220. *ibid*, OIC SI 935 of 30 April; ADM 223/193, Ultra signal 1105/1 May; ADM 223/287, USION, pp 58–59.

221. Heinz Bonatz, *Seekrieg im Äther* (Herford, 1981), p 353.

the German naval grid of closed areas between Boulogne and Dieppe, off Flushing, off L'Abervrach in Brittany and west of Fécamp; reported the diversions from the swept channel brought about by inshore mining between St Valery-sur-Somme and Dieppe; and disclosed that an 'alarm barrage' had been established north of the Cotentin.²²² Another Schranke message was of even greater importance. Decrypted on 17 May, it announced the closing of two adjacent areas together measuring roughly 12 miles by 7, and gave their boundaries; they were in the middle of the Seine Bay, half-way between Barfleur and Antifer.²²³

Within these closed areas the limits of the actual minefield remained uncertain, but information about the southern limit of the field in the Seine Bay, which was invaluable in that it enabled the Allies to extend the sea-room available for the boat-lowering area to be used by the assault forces, was obtained a fortnight before D-day. An Offizier signal of 19 May, decrypted on 20 May, contained the news that the torpedo-boats in Cherbourg were ordered to proceed to Le Havre in order to lay two flanking minefields. In the light of this warning and of subsequent air reconnaissance, Allied aircraft and MTBs engaged on 23 May a force of torpedo-boats, minesweepers and E-boats a few miles south of the assumed northern limit of mine-free water, 49° 30' N. It seems probable that the interception succeeded because the OIC had hoped for some such opportunity and made preparations for it. The Germans lost one torpedo-boat and one minesweeper, while one torpedo-boat, one minesweeper and one R-boat were damaged. Their defensive mining effort was thus irreparably crippled; no further minelaying was attempted in the *Neptune* area before D-day.²²⁴ Still more important, a flood of PP signals specified the points through which the damaged ships and their rescuers were to manoeuvre. This enabled the OIC to establish, and to promulgate on 31 May, the exact limits of mine-free water in the Seine Bay and the vicinity of Le Havre.²²⁵

Meanwhile, on 14 May, an Enigma decrypt had provided further intelligence of great value about the minelaying in shallow waters. It disclosed that the mine being used was the KMA, of which it gave details, and that it was a ground-mine laid in water between 3.5 and 5 metres deep. With this information the OIC

^{222.} ADM 223/172, OIC SI 935 of 30 April.

^{223.} ADM 223/287, USION, pp 4, 26, 71; ADM 223/195, Ultra signal 1459/31 May. See also ADM 223/172, OIC SI 948 of 9 May.

^{224.} Roskill, op cit, Vol III Part 1 (1960), p 291; Beesly, *Very Special Intelligence* (1977), p 231.

^{225.} ADM 223/287, USION, pp 4, 25–26; ADM 223/195, Ultra signal 1459/31 May.

was able, after reviewing the Enigma and PR evidence on the enemy's inshore activity since February, to distinguish the mining from the laying of beach obstacles and to conclude that KMA mines had been laid at various specified locations between Den Helder and Bayonne. This appreciation, together with an assessment of the KMA's characteristics, was drawn up by the OIC and the Admiralty's Directorate of Torpedoes and Mining, and issued to Ultra recipients between 16 May and 1 June.²²⁶ None of the locations mentioned in the appreciation was in the Seine Bay. This correct conclusion was adopted by ANCXF in his final operational orders. They stated that inshore of the German coastal channel, in which the Allied boat-lowering positions were to be sited, there was no evidence that ground-minelaying had taken place.²²⁷

The orders added, however, that ground-minelaying in shallow water off the beaches by aircraft, and possibly E-boats, was to be expected as soon as the enemy became aware of Allied intentions. As we have already noted, a decrypt of 30 May disclosed that he was making final preparations to carry out such minelaying, the first by the GAF since September 1943, from Ostend to the Garonne.*



Unlike the intelligence the Allies obtained about Germany's minelaying, the mining they themselves carried out in the weeks before D-day made little if any contribution to the success of *Overlord*. The large-scale mining that was undertaken with a view to D-day was mainly concerned to seal off the anchorages and convoy routes from intervention by the German Navy. But in the event during the assault phase the beaches were approached only by minor vessels and, as was confirmed by post-war research, the mining did not greatly limit their freedom of movement in the areas adjacent to the beaches.²²⁸ The German main units did not leave the Baltic and the U-boats achieved no successes before mid-June.†

The official history of the war at sea has recognised that there was a risk that the surface units of the German Fleet from the pocket-battleships downwards 'might all be used on forays into the

* See above p 62 and, for the operational consequences of the GAF effort, below pp 151 fn*, 165ff.

† See below, p 160.

226. ADM 223/287, USION, p 71; ADM 223/194, Ultra signals 1839/16 May, 1634/18 May; ADM 223/195, Ultra signal 1854/1 June.

227. CAB 44/242, pp 248–249.

228. BR 1736(56)(1), pp 403–404.

eastern approaches to the Channel if the enemy was really determined to stake everything on interrupting the invasion convoys'. It has nevertheless criticised the NID for exaggerating this threat by assuming that all the ships – the entire fleet except for *Tirpitz* and *Gneisenau* – were fit for operations.^{229*} The NID did indeed take the view on 5 May that 'all main units except *Tirpitz* and *Gneisenau* are fully effective'.²³⁰ On 10 May, moreover, on the OIC's advice, a paper which was drawn up by the British and US JICs and issued a week later as a CIC appreciation, allowed that they might all intervene against *Overlord*. The pocket-battleships *Scheer* and *Lützow* and the 8" cruisers *Hipper* and *Prinz Eugen* would not be used directly against the assault except as a desperate measure, but they might be moved to north Norway to threaten a break-out into the Atlantic and thus divert some of the Allied forces covering and supporting the invasion. The four light cruisers (*Leipzig*, *Köln*, *Nürnberg* and *Emden*) might make sorties into the North Sea to attack convoys off the east coast. The paper conceded, however, that whether or not the ships were so used would depend on how badly they were needed in the Baltic against the Russian advances.²³¹

The OIC did not modify this appreciation until 30 May, when, presumably on the strength of the regular PR of the Baltic bases that was maintained up to D-day, it reported that *Hipper* and *Köln*, now believed to be refitting, would not be effective for another four weeks.²³² But it came as no surprise to the OIC that, in the event, none of the ships left the Baltic. In relation to the light cruisers, though not in relation to the threat of a break-out into the Atlantic by the other ships, the appreciation of 10 May was clearly no more than a worst-case hypothesis. The OIC no doubt felt that it must assume the worst, as it felt that it must maintain the PR watch, in view of the fact that the other intelligence sources might not give advance information on the enemy's intentions about the use of his surface ships.

With regard to the use of the U-boat fleet, the OIC assumed from the outset that the Germans would use the U-boats against the landings and the follow-up convoys regardless of losses; and it would naturally have done so even if the Enigma had not disclosed

* The NID appreciated early in May that *Tirpitz* would not be operational before July; thereafter, despite the lack of conclusive evidence and the failure of two further attempts to attack her in May, it stood by this appreciation (See Volume III Part 1, pp 273 ff). It was known from PR that *Gneisenau* was lying dismantled in Gdynia.

229. Roskill, op cit, Vol III Part 2, pp 10, 11fn.

230. ADM 223/120, NID UC 480 of 5 May 1944.

231. CAB 121/394, CCS 454/6 of 17 May 1944.

232. ADM 223/172, OIC SI 967 of 30 May.

the reaction of the U-boat Command to the invasion alarm in Biscay in January 1944.* As events were to show, the OIC also exaggerated the number of U-boats that would be committed in the western Channel and the approaches to it. On 1 March it believed that some 75 500-ton U-boats would have been committed there by D+4 or D+5.²³³ By 30 April it had advised the JIC that ten to twelve 500-ton U-boats might enter the western Channel in advance of the invasion, of which one or two might be stationed off the south coast or north Cornwall; that a total of 90 such boats would be assembled in Biscay by D-day; and that other 500-ton U-boats would then be pulled in from the Atlantic (50 by D+2 and 65 by D+5).^{234†}

The fact that the occasional U-boat was patrolling close to the south coast had emerged from Sigint at the end of February, though not before the destroyer *Warwick* was sunk by a U-boat off the north Cornish coast on 20 February.‡ In a decrypt of 23 February the U-boat was told that it could either stay in the area or operate towards the North Channel, between Scotland and Ireland, and was informed that two U-boats would be patrolling north of the North Channel in the next new moon period.²³⁶ On 7 March another decrypt had revealed that a U-boat was en route to the Minches; it was told that no U-boat had operated there for two years.²³⁷ And in April analysis of U-boat movements as revealed in Enigma decrypts established that the enemy was holding back the departure of 500-ton U-boats to the Atlantic in order to accumulate them as an anti-invasion force.

For weeks before D-day this policy on the part of the U-boat Command, together with the decision to strengthen the Arctic and Mediterranean flotillas, produced a drastic fall in the U-boat effort in the north Atlantic, which had already been greatly reduced by the losses incurred in the enemy's attempts to renew the offensive against the convoy routes.§ The fact that the Allies were aware of

* See above p 50.

† It emerged from later appreciations that the OIC allowed that this further reinforcement might include up to three 740-ton U-boats.

‡ It has been claimed that *Warwick* was sent to these waters because intelligence had indicated the enemy intention to send a U-boat there. No such intimation came from Sigint. Possibly there was confusion with Sigint's disclosure in mid-January that a quite separate U-boat had been ordered to operate off the coast of Northern Ireland.²³⁵

§ See Volume III Part 1, p 236 et seq.

233. CAB 121/394, JIC(44)66 of 1 March.

234. ibid, JIC(44)176(o) of 30 April.

235. Roskill, op cit, Vol III Part 1, p 293; Naval Headlines of 15 January.

236. ADM 223/190, Ultra signal 1547/23 February.

237. ADM 223/191, Ultra signal 1625/7 March.

this was an enormous strategic asset, enabling them to re-organise the convoy system (convoys of more than 100 ships were sailing from mid-April) and transfer destroyers and other escort vessels to meet the huge demand for naval support that was created by the enlargement of the *Overlord* assault area.²³⁸ In fact, ten U-boats were formed into a group in south Norway (*Gruppe Mitte*) in February and their number was raised to 22 by the end of March. On 22 March fifteen were held back in Biscay (*Gruppe Landwirt*); early in April they were reinforced by six which had just entered the Atlantic from the Baltic, and from the middle of April all 500-ton U-boats in Biscay ports were held back apart from the few sent to patrol off the British coast.²³⁹ On 9 April the OIC noted that since 22 March no 500-ton U-boat had left Biscay, where 17 of them had been in port for longer than their normal turn-round period, and that six which had recently entered the Atlantic from the Baltic on their first cruise were proceeding direct to Biscay; and it estimated that 65 500-ton U-boats would be available in Biscay by mid-May.²⁴⁰ On 8 May, however, it believed the number in Biscay to be only 43, and it was then that it also reported for the first time 'a tendency' for 500-ton U-boats to be held back in south Norway.²⁴¹

In its next appreciation, the JIC paper of 10 May drawn up for discussion with the US JIC before being issued by the CIC on 17 May, the OIC repeated the forecast made at the end of April: 90 boats would be available in Biscay by D-day, and would be joined by 50 from the Atlantic by D+2, by 65 by D+5.²⁴² Within a few days of its release, however, decrypts received on 19 and 20 May threw a flood of light on the actual plans of the U-boat Command.

In one of them, which clearly would not have been transmitted by W/T but for the disruption by Allied bombing of the enemy's land-lines, Captain U-boats West informed Naval Gruppe West of his anti-invasion intentions. It stated that an unspecified number of U-boats were to sail at intervals, but that if any had not sailed before the Allied D-day, and if the Channel appeared to be the theatre most threatened, all U-boats at Brest and Lorient, plus seven from St Nazaire and five from La Pallice, would sail on the evening of D-day and the remainder on the evening of the following day. They would be disposed as follows:

- (1) an unspecified number, all but one equipped with *Schnorkel*

238. Roskill, op cit, Vol III Part 2, p 10.

239. ADM 234/68, pp 55–56, 67.

240. ADM 223/172, OIC SI 910 of 9 April.

241. ibid, OIC SI 944 of 8 May.

242. CAB 121/394, CCS 454/6 of 17 May.

*chel**²⁴³, in the coastal area between the Scillies and a point east of Start Point;

- (2) four non-*Schnorchel* boats from Brest in waiting positions in the north Biscay area with a view to possible employment in the Channel as a second wave;
- (3) all other non-*Schnorchel* boats in Brest in waiting positions about 150 miles south-west of Brest;
- (4) an unspecified number of *Schnorchel* boats from Lorient in the coastal area between the Scillies and Trevose Head;
- (5) an unspecified number of non-*Schnorchel* boats from Lorient to a waiting area in central Biscay.

Together with the seven boats from St Nazaire and the five from La Pallice, those sent to waiting positions in Biscay would dispose themselves evenly in a 45-mile wide strip of which the centre line was joined by a point 150 miles west of St Nazaire and a point off the Spanish coast, 30 miles west of Bilbao. The message added that these non-*Schnorchel* boats would not be very effective for reconnaissance as they would be surfaced only at night.^{243†}

The other decrypts of 19 and 20 May disclosed that three 500-ton U-boats had been ordered from Brest into the Channel, the first leaving on the evening of 18 May and the other two on the evening of 20 May.²⁴⁵ The signal gave no indication of their destination, and it was at first assumed that they were to patrol off the English south coast. By 26 May, however, further decrypts had revealed that the number of U-boats, now named *Gruppe Dragoner*, had risen to five, that one had returned to port with defects, that another had been attacked and forced back and that the remaining three had patrolled as far east as St Malo until recalled on 25 May. These decrypts indicated that one of the objectives of the sortie had been to test the effectiveness of the *Schnorchel* in coastal waters under air attack in advance of the planned incursion of U-boats into the Channel to operate against the invasion.²⁴⁶

* See Volume III Part 1, pp 241–242, for the evidence leading to the identification of *Schnorchel* as a ventilation trunk in February 1944.

† A summary of this decrypt was sent to the Prime Minister, who asked the First Sea Lord for comments and a short note on 'our own counter-measures'.²⁴⁴ For the First Sea Lord's reply see Appendix 11.

- 243. Naval Headlines 1052 of 21 May; ADM 223/88, Colpoys, *Admiralty Use of Special Intelligence in Naval Operations*, p 295.
- 244. Dir/C Archive, 6548 of 21 May 1944.
- 245. ADM 223/172, OIC SI 956 of 19 May.
- 246. Naval Headlines 1051, 1052, 1056, 1057 of 20 to 26 May; ADM 223/172, OIC SI 960 of 22 May; US Department of Defense, *Allied Communication Intelligence and the Battle of the Atlantic*, Vol II, pp 195–196.

This intelligence left several questions unsettled. The numbers of U-boats involved in the signal from Captain U-boats West could only be guessed at. A chart submitted to the Prime Minister by the First Sea Lord estimated that in Biscay something over 34 non-Schnorchel boats and an unknown but far smaller number of Schnorchel boats were probably fit for operations. The extent to which they would be reinforced before D-day, particularly from the accumulation of U-boats in south Norway, could not be foreseen. It was clear from Sigint that some of these U-boats from south Norway, whose numbers were also unknown, were already leaving; on 5 June the OIC was to report that between 33 and 37 had sailed, their destination unknown, since the middle of May.^{247*} On 25 May the final appreciation issued by the JIC gave the OIC's estimates on these two points. It stated that 45 500-ton U-boats had been located in Biscay ports by 20 May, but that they would be reinforced by D-day by a further 25 boats, making 70 in all. In addition the enemy might move ten or more 500-ton U-boats from the Atlantic to the western and central Channel. From D-day other U-boats would follow into the western and central Channel, some from among the 70 Biscay boats and others from the eastern north Atlantic, to the number of 45 by D+2, 60 by D+5.²⁵⁰

It also remained uncertain to what extent the U-boats concentrated in Biscay would be used to attack the initial Allied landings or to harass the follow-up convoys in the western and south-western approaches to the Channel. On this account, as well as on security grounds, the arrangements already made for intensive anti-submarine measures throughout the vast area of the approaches were retained. But steps were taken to ensure that those measures were heavily concentrated against the patrol and waiting positions specified in the Enigma decrypts, and in order to ensure that maximum use was made of any further Sigint, a U-boat plot was set up for C-in-C Plymouth under an officer from the OIC's U-boat Tracking Room.²⁵¹

* Decrypts of 1 and 14 May associated some of them with an operation code-named *Wallenstein*.²⁴⁸ Earlier Sigint references to this operation had suggested that it might be a general plan for defence against invasion of southern Norway and the Baltic entrances, but those references had been few and obscure. It is now known that some of them went to reinforce the Arctic flotilla and others went to the Atlantic. No less than 22 of them were sighted by Coastal Command, which, with the help of Sigint, sank 7 and forced 4 to return to port.²⁴⁹

247. ADM 223/172, OIC SI 973 of 5 June.

248. DEFE 3/413, ZTPG 23755; DEFE 3/730, ZTPGU 25126, 25133, 25189.

249. Roskill, op cit, Vol III Part 1, pp 260–262, Part 2, pp 20–21.

250. JIC(44)215(o) of 25 May.

251. ADM 223/88, pp 294–295; Handling of Naval Special Intelligence, pp 38, 51; Beesly, op cit, p 242.

No further Sigint about the U-boats in Biscay was obtained before D-day; nor did air reconnaissance detect any sign that any of them had sailed.²⁵² In these last few days, however, the decrypt of a signal from the head of the Japanese Naval Mission in Berlin enabled the Admiralty to discount, however belatedly, the threat from 'small . . . high-speed submarines or submersibles . . . within the Channel itself'. This threat had first been mentioned in those terms in the JIC's appreciation for the CIC of 10 April.²⁵³ By 30 April the OIC had advised the JIC that while such craft might be a threat in the eastern Channel and the southern North Sea, there was no evidence that any were yet operational.²⁵⁴ The JIC appreciation of 10 May had contained no such hesitation. It had stated that some twenty 250 to 300-ton U-boats and an uncertain number of submersibles of unknown characteristics 'will be based on ports in the Low Countries and the eastern Channel' for offensive operations.²⁵⁵ The final JIC assessment of the scale of opposition to *Overlord*, issued on 25 May, was hardly less emphatic: 'Offensive operations in the eastern half of the Channel and the southern North Sea are likely to be carried out by the small type of U-boats (of 250–300 tons) and small submersible craft'.²⁵⁶

The 250 to 300-ton U-boats were the Type XXIII boats, which had at last been observed under construction in the third week of April.* The submersibles were the W-boats, now distinguishable from the Type XXIIIs; the threat from them as a specific anti-invasion weapon had been discerned at the end of February. The threat from both had thereafter continued to be a source of grave and growing anxiety. An *ad hoc* NID *Overlord* Committee had singled out the W-boat training centre as a priority target. Measures against W-boats had been rehearsed in the final Allied exercise, Operation *Fabius*, early in May. Torpedo tubes had been replaced by depth-charges in some of the MTBs in the Channel Commands. Although the OIC regularly advised the Commands that there was as yet no evidence from W/T traffic that the new type of U-boat was operational, the Commands had received and distributed frequent reports of suspicious sightings and tracks, especially after the circulation of the appreciation of 10 May. Nor were such reports to cease after 30 May when, to the great relief of the Admiralty, the decrypt of Admiral Abe's signal disclosed that

* See Volume III Part 1, p 244.

252. ADM 223/172, OIC SI 973 of 5 June; AIR 41/23, p 240.

253. CAB 121/394, CCS 454/4 of 10 April 1944.

254. *ibid*, JIC(44)176(o) of 30 April.

255. *ibid*, CCS 454/6 of 17 May 1944.

256. JIC(44)215(o) of 25 May.

the Germans had not yet completed their experiments with U-boats using a form of closed-cycle engine for underwater propulsion.* But Traffic Analysis at the last minute revealed that HQ Small Battle Units (KdK) had established communications with Le Havre similar to those which existed with its bases in the Mediterranean: NID thought that this pointed to the possibility of KdK-type operations in the Channel and so informed SHAEF.

* See Volume III Part 1, pp 243–245 and its Appendix 11.

