minesweeping operation that had yet been undertaken in war. The provision of the necessary minesweeping flotillas had only been achieved by drawing upon some which had little opportunity for practice, and, when my operation orders were written, it was realised that the successful completion of the minesweeping tasks would demand a high degree of skill from all concerned. Subsequently the late appearance of beach obstacles on the assault beaches further complicated the problem, as the alteration in the time of H hour relative to high water that resulted meant that it would now be necessary for all flotillas to change sweeps during passage to avoid sweeping with an unfavourable tide. Some flotillas had no opportunity to rehearse this manoeuvre at all, as it was not decided on until after exercise "Fabius," and the fact that all successfully achieved it is considered most satisfactory.

35. Sweeping was carried out in all cases according to plan, despite stronger tidal streams than had been allowed for and the unfavourable weather, which made very difficult the operation of the Mark 5 sweeps by M.L.s, and the minesweepers approached the French coast without interference. The early arrival of the Western Task Force flotillas had been a cause of some anxiety during planning but, because surprise was in the event achieved, it had no unfortunate result. The senior officers of the flotillas concerned expressed surprise in their reports that although the enemy coast at Cape Barfleur was sighted as early as 2000 on 5th June no batteries opened fire at them and the operation proceeded unopposed; in this connection it may be noted that minesweepers switched on R.C.M.\* at 2130.

## Naval Bombardment.

36. It had been planned that ships should be ready to open fire at their pre-arranged targets either from the time when the assault convoys came within range of them or from the time when it was light enough for the enemy to spot his fall of shot visually, whichever was the later; but that, if possible, fire should be withheld until it was light enough for air observation. In the event, this proved possible with the exception of one or two ships in the Western Task Force, who found it necessary to open blind fire against certain batteries whose fire was more accurate than was the general case.

37. As Bombarding Force D arrived in position on the Eastern Flank at 0515, a half-hearted attack was made by four enemy E-Boats and some armed trawlers which had come out of Havre. The enemy were seen indistinctly against the land and were almost immediately obscured by the pre-arranged smoke screen laid by our aircraft, from behind which they fired torpedoes. The heavy ships managed to comb the torpedo tracks but the Norwegian destroyer SVENNER was hit and sunk. One enemy trawler was sunk and one damaged, and the attack was not renewed. The danger to friendly forces of smoke laid to a pre-arranged plan was plainly exemplified.

38. The fire from enemy batteries, which was never severe, was directed initially against bombarding ships only, and was largely ineffective.

\* Admiralty footnote: R.C.M.—Radio Counter-Measures.

This is considered to have been due to the combined success of the pre-D day bombing programme, the heavy air bombardment in the early hours of D day, and the measures taken to prevent the enemy from ranging and spotting; and it demonstrates that duels between ships and coastal batteries are in certain eventualities feasible provided such precautions are taken. It must be remembered, however, that the scale of coast defence in the assault area was the lowest on this part of the coast and the results would have been very different, for instance, in the Pas de Calais. Much of the success of naval bombardment must be attributed to the work of the single-seater fighter spotters, who carried out their tasks tirelessly and gallantly. Communications between bombarding ships and spotting aircraft suffered a number of failures at the start owing mainly to the novel nature of the technique, but they improved rapidly with successive waves of aircraft.

39. Warships and gun support craft took part in the drenching of beach defences immediately prior to the assault. This fire appeared accurate, and was of sufficient weight to neutralise and demoralise the defenders, except on OMAHA Beach where the total failure of the day heavy bombers, due to low cloud base, contributed to the much stiffer opposition than was found elsewhere. Of the support craft the L.C.G.(L)\* deserves special mention. This craft, which achieved only partial success in the Mediterranean due to lack of training and shortcomings in its equipment, was particularly effective and further demonstrated the value in assault of high velocity guns at close range. Since D day it has continued to provide effective direct and indirect fire support.

## The Assaults.

40. The choice of the "lowering positions" (U.S. "transport areas")† had been a matter of considerable discussion, the conflicting factors of being outside the range of the enemy's share batteries and south of the known mined area having to be balanced. The Eastern Task Force (British) finally chose their "lowering positions" about 7 to 8 miles off shore, whilst the Western Task Force (U.S.A.) decided to place them further to seaward, 10 to 11½ miles out. In the rough weather that obtained when the assault forces arrived in the "lowering positions," the longer passage inshore for the assault craft from the Western Task Force appeared to add appreciably to their difficulties.

41. To mark the approaches to the beaches so for Forces S and J two X-craft were employed as it was very important that Force S should not be too far to the eastward, and the coast in Force J's sector was not distinctive in outline. These craft had sailed on the night of 2md/3rd June, being towed for part of the passage. Each submarine received at 0100 5th June a message that the assault had been postponed 24 hours, and, in spite of the difficulties of navigation for a craft of very slow

Admiralty footnotes:

\* L.C.G.(L)—Landing Craft Gun (Large), a type of "support craft" not actually used for landing men or material.

<sup>†</sup> These positions or areas are those in which the ships carrying assaulting troops and craft stop to lower these craft and disembark the troops into them.