

to drag on painfully, and finally to lose momentum and expire through the exhaustion of Naval personnel and the liquidation of shipping.

It will be seen, therefore, that the initial problem called for a maximum effort over a limited period regardless of the future, and accordingly all resources in the way of small boats were thrown on the beaches, before adequate provision had been made for their maintenance off the coast in such matters as relief of the personnel and the provision of large beach parties.

It was only due to the foresight of the Admiralty in making arrangements for a continued flow in ever increasing numbers of small power boats and beach craft, which became available on the fifth day onwards, that the continued evacuation from the beaches remained a reasonable proposition after the initial crisis had passed.

4. A perusal of the signals that passed between Dover and the French coast reveals the many occasions on which the responsible officers stationed on the coast considered so little had been achieved from the beaches that they advocated restriction of evacuation to Dunkirk Harbour. Many complaints of "no boats," "no ships," might lead a detached observer to the conclusion that the great effort that was being made was proving abortive.

At Dover, where the whole operation could be viewed in truer perspective, the number and origin of the troops being landed in England being always to hand, it was clear that the evacuation from the beaches required by the military situation, was, in fact, achieving a considerable success, as the following figures will show. Of the 248,000 troops landed in the United Kingdom, between May 28th and June 1st inclusive—the period during which both Dunkirk and the beaches eastward were available day and night except for enemy interference—no fewer than 100,000 were lifted from the beaches.

5. WEATHER CONDITIONS.

The operation was favoured by extremely good weather. It was found, however, that any northerly wind caused a considerable surf, which greatly reduced the rate of lifting from the beaches. It must be fully realised that a wind of any strength in the northern sector between South West and North East would have made beach evacuation impossible. At no time did this happen.

6. DISPOSAL OF TROOPS AFTER REACHING ENGLAND.

On arrival in England the despatch of troops from the points of disembarkation proceeded with great smoothness under the War Office movement control organisation.

7. ENEMY EFFORTS TO FRUSTRATE OPERATION.

Attempts by the enemy to frustrate the operation consisted of the following:—

- (a) Minelaying by aircraft.
- (b) Intensive air attack.
- (c) Action by Motor Torpedo Boats.
- (d) Gunfire by coast artillery.
- (e) Submarine operations.

(a) *Minelaying by aircraft.* Minelaying during the dark hours probably commenced during the night 28th-29th and was maintained with great intensity during the following two

nights. Not only were the Dunkirk Roads mined, including the Zuydecoote Pass, but also Route X and the area round the Kwinte Buoy. Folkestone and Dover Harbour entrances were also mined. Considering the number of mines laid, it is interesting to note that only two British ships are known for certain to have been mined, the personnel vessel MONA'S QUEEN and the F.A.A. Yacht GRIEVE. One Hospital Carrier was damaged at anchor off Dover when a mine was blown up by a LL. Trawler sweeping close at hand. Two A/S trawlers on patrol to the northward of the operational area were blown up by what was at first thought to be a M.T.B., but later evidence suggests they were victims of moored mines. The impunity with which degaussed ships were able to operate in this heavily mined area alone made the operation possible and one reaches the conclusion that if the enemy on this occasion had had at hand the means of laying moored contact mines by aircraft, instead of magnetic mines, the results would have been very different.

(b) *Air Attack.* On the evening of the 29th, the first occasion on which a massed target of ships was presented in Dunkirk Harbour, the enemy seized the opportunity for air attack in great strength, and it was only by good fortune that the vital Dunkirk Harbour channel was not blocked by sinking ships at this early date. From then onwards the scale and vigour of the air attack increased, and during the 1st June all ships in Dunkirk, off the beaches, or in the approach channels, were subjected every two hours to an unprecedented scale of air attack by aircraft in such numbers, that the R.A.F. were unable to deal with the situation. The scale of enemy air attack on June 1st, and the fact that the Germans could by now command the newly-swept central route at its exits into the Dunkirk Roads with gunfire from the shore, were responsible for the suspension of daylight evacuation on June 2nd.

(c) *Attack by M.T.B.s.* These caused 4 casualties, namely two destroyers and two trawlers, while the north Route Y* was in use. When the middle Route X*, some 26 miles further to the South Westward, was brought into use the enemy M.T.B. units failed to follow up, though the continuous stream of unescorted traffic during the dark hours and the ships lying in Dunkirk Roads provided a tempting target to any enterprising Commander.

(d) *Shore Artillery.* At the commencement of the operation, the southern Route Z* was found to be under gunfire from batteries near Calais, and consequently could only be used by night. The northern Route Y was usable only by night when later the batteries near Nieuport brought fire to bear on the Zuydecoote Pass, which was too narrow to permit a reasonable chance of ships running the gauntlet of fire. By this time, however, Route X was available, and was free of gunfire until German batteries near Gravelines brought its exit into the Dunkirk Roads under gunfire. This occurred in the afternoon on Saturday, 1st June, and in conjunction with the result of enemy air attack, led to the suspension of daylight traffic altogether.

(e) *Submarines.* U-Boats do not appear to have caused any casualties. It is unlikely that

* Admiralty footnote: For Routes X, Y and Z see Diagram.