o700 hours and ended at 2100 hours, some 400 heavy bombs up to 500 kg. were dropped in addition to countless numbers of incendiary bombs. The methods employed were high level bombing at between 10,000 and 15,000 feet and dive bombing from 8,000 to 2,000.

As a result the port became unusable by day, wooden quays were destroyed, and stone and concrete quays and their approaches were seriously damaged. In one day one Norwegian torpedo boat, three trawlers and two ferry steamers were sunk.

- 67. As has been recounted above, valiant efforts were made to operate Gladiators from the neighbourhood of Andalsnes. These, however, failed because the enemy, having immediately noticed their arrival, bombed the airfield continuously throughout the day. Had they succeeded I have little doubt that a marked change would have come over the whole situation. As I have already reported when referring to the work of the Fleet Air Arm, the German bomber will not stand up to the boldly handled fighter, and there can be no question but that, had these Gladiators been able to keep the air until Hurricanes and subsequently Blenheims could have operated, the Allied troops would have had no difficulty in landing the guns and other supporting arms they needed and in entirely stopping the German advance.
- 68. It is easy to be wise after the event, but it is now quite obvious that the establishment of an aerodrome in the face of hostile aircraft is a combined operation requiring the most careful planning.

Looking back on this operation it is clear

that there are several essentials:—

(a) Strong A.A. Defences must be established before the first aircraft arrives.

(b) All preparations must be made so that aircraft can operate in the shortest possible time after landing.

(c) During the period of first arrival, long range fighters or Fleet Air Arm fighters should

be provided to cover the landing.

- (d) Sufficient aircraft must be landed to provide continuous protection for the aerodrome and to provide protection for the establishment of at least a second aerodrome.
- (e) Bombers should be flown on as soon as the aerodrome is secure.
- 69. I have already reported that several requests were made to the Air Ministry for Bombers to attack the German Forces moving up the Gudbrandsdal valley and the communications behind them.

This was found impossible, and I am not in a position to question the correctness of this decision.

I can, however, say that had it been possible to attack the German Army and its communications, a direct effect on the operations would have been achieved with a considerable saving certainly in material. The withdrawal and evacuation could not then have been closely followed up by the enemy, as in fact it was, and the process of evacuation need therefore not have been as hurried as it necessarily was under the existing conditions.

I have no hesitation in saying that it is essential that a degree of co-operation between the Army and the Air Force, comparable to that which is now the case with Germans, is essential

if we are not to remain at a dangerous disadvantage. The direction of the two forces in any theatre of war must be the task of one commander in that theatre if results are to be obtained commensurate with the effort made.

## 70. The Dangers of Improvisation.

A further outstanding lesson of these operations is the grave handicap under which both the commanders and the troops suffer when force and formation headquarters are improvised and thrown together at the last moment.

For this campaign in Central Norway the expeditionary force headquarters was ordered to form after active operations, involving British troops, had begun, and I was charged with the conduct of those operations whilst my headquarters was still in the process of assembling.

I cannot stress too strongly the dangers of such improvisation. It is clear that we were taken by surprise by the methods which the Germans employed to seize the key points in Norway, and consequently we were forced to resort to unorthodox methods of procedure.

Even if it is hoped that a landing will be unopposed, efforts to build up the Base and Lines of Communication organization must be continuous from the earliest possible moment. I realise that difficulties arose owing to a change of plan and shipping limitations, but, when evacuation was decided upon, the organization at Andalsnes was very incomplete while that at Namsos had hardly started. As a result, no clear administrative picture was ever available as regards either force, the consequences of which might have been serious.

It is quite certain that the functions of 2nd Echelon cannot be carried out in the United Kingdom for a force operating under Norwegian conditions. 2nd Echelon for the forces based upon Andalsnes and Namsos was located in Margate and, as a result of long and uncertain communications and of changes in plan, was never in touch with the situation.

71. The least that can now be done is to ensure that this undesirable situation does not occur again, and that provision is made for a force headquarters and certain formations and units and a complete establishment of Base and Line of Communication units which can be held as reserve for use in any theatre to which the war may spread, including France if necessary.

I submit that the nucleus of such a force should be:—

A Corps Headquarters, modified to control an expeditionary force.

One regular division.
One territorial division.
A small armoured brigade.

Certain corps troops.

Base and Line of Communication units.

2nd Echelon for all the above.

If a reserve such as this is to be able to act swiftly and decisively at any point overseas, there are certain other requirements which must be met.

These are: -

- (a) Time for training in amphibian operations.
  - (b) A suitable training area.

(c) An allotment of landing craft and ships fitted to carry them.

(d) Facilities for studying and practising air co-operation, particularly with a fighter and bomber component.