CHAPTER 11
SETTING-OUT

1101. The object of setting-out is to mark on the ground actual positions and ruling dimensions for the guidance of plant operators and task supervisors. The system adopted and the methods used should be the simplest that give the degree of accuracy necessary for the particular task.

1102. Normally there is a difference between the standard of setting-out of tactical routes close to the enemy and roads of a more permanent nature. In the former, which are typical combat engineering tasks, speed of opening the route is usually of greater importance than technical accuracy; the latter, which are appropriate to logistic engineering, require a higher standard of technical accuracy.

1103. This section describes the proper setting out of these tasks and serves as an introduction to the precise methods of setting-out employed in logistic engineering.

1104. Where site clearance is a heavy task, it may be necessary to divide setting out into two phases. The reason for this division is that pegs marking the detail of the finished work may be removed or displaced by plant engaged in general clearing. The phases are likely to be:

a. Establishment of the centre line of the formation and marking the limits of the cleared area. This enables work to start on clearing, grubbing, and stripping.

b. Detailed location of the road components and the top and toe of banks.

SECTION 49-HASTY WORK ON TACTICAL ROUTES

1105. Preliminary study and air reconnaissance are vitally important if prior ground reconnaissance is impracticable.

1106. The first stage is to fix the general alignment by taking long shots with the compass and pocket level. The minimum party for this stage is:

officer	..	Map, compass, level.
staff men	..	Staffs, pegs, mauls.

Additional men will be needed for carrying and fixing pegs in broken country or on long routes. A clearing party, with saws, axes and billhooks, may also be required. A dozer may be desirable.

1107. The second stage is to fix the working pegs making the detailed alignment. The principle in sitting them is to avoid unnecessary work and to save time. This involves:

a. Considering the balance of earthwork quantities.

b. Visualizing how plant is to reach the site and how it will be set to work.

Hasty estimation of quantities is dealt with in para 136- and the proforma given in Figure6.3 is useful both in making the plan and for recording its elements.

1108. Only essential pegs need be driven, as follows:

a. Centre line pegs: Preferably at every 100 ft and at all tangent points.

b. Working pegs: Driven as soon as the cross section has been settled, and set a standard distance (2 or 3 ft) outside the point where the machine is to start work. Two pegs are needed to mark the extremities of through cuts and embankments, one peg only in side-hill cut, at the top of the cut.