

RESTRICTED

CHAPTER 32
WORK ANALYSIS
SECTION 151 – ESTIMATES

3201. **Estimates are Required.**

- a. To determine the plant and labour required.
- b. To determine the time required to complete the task.
- c. To prepare a work programme.

3202. **Preliminary Estimates are of Two Kinds.**

- a. Quantity survey.
- b. Calculation of resources required.

Quantity Survey

3203. The aim is to assess the amount of work to be done in the excavation, movement and processing of material.

3204. Normal methods of determining quantities are:

- a. Clearing, grubbing and stripping. Measure areas on air photographs or maps.
- b. Drainage. Measure the lengths of ditches from contoured maps or air photographs. Obtain the number and size of culverts from the reconnaissance report, or by careful study of maps and air photographs.
- c. Earthwork. See Section 30. Measure haul distance from the longitudinal section.
- d. Bases and surfacing. Multiply the cross sectional area by length shown on sketch plans.

Calculation of Resources Required

3205. The aim is to work out the actual requirements of equipment and labour, and the quantity of imported materials to be provided. If equipment is restricted the estimate should determine the time required for completion. If time of completion is the ruling factor, the estimate should ascertain the resources which must be made available. In either case, the preliminary estimate should take the form of a job table (see Section 145).