

Appendix IV – Soil Survey Methods

In making this soil survey, the soil surveyors listed at the front of this report walked over the land and bored holes at intervals varying from 4 to 20 ch apart, depending on the complexity of the soil pattern. The soil profile at each spot was exposed with a 4 in. Jarrett soil auger, usually to a depth of 4 ft., but sometimes to 7 ft., and the soil classified into its soil type. To do this the soil surveyor examined the various horizons in the soil profile and noted their texture, friability, colour, thickness, and the presence of lime, iron concretions and gypsum.

The soil type at each point examined was marked on an aerial photograph (scale 1 in. to 20 ch) and a boundary drawn to show where one soil type changed to another. Surface features such as change of slope, depressions and rises, which often show on aerial photos were helpful in determining where the change occurred. But it should be appreciated that a soil boundary line shown on a soil map represents a zone of transition. This zone may be narrow which means that the soil change covers only a few feet or yards, or it may be gradual with the transitional zone extending over one or more chains.

Preliminary soil maps at a scale of 1 in. to 20 ch were constructed by transferring the soil boundaries from the aerial photographs on to suitable base plans.

These are the relevant standard mapping areas of the Military Map Series with the parishes and allotments shown.

It has been necessary to reduce the size of the soil maps for publication, consequently, the scale of the maps in this bulletin has been reduced to 1 in. to 40 ch.

The smallest area that can be shown on the soil map at the scale used is about 1½ ac., i.e., 4 ch. across. This means that any area shown as a single soil type may have small areas of one or more soil types with it, *but not to a greater extent than about one sixth of the occurrence*. Where the other soil type (or types) covers more than one sixth, but not more than one third, its presence has been denoted by an inscription on the map.

Where soil types are intermingled, it is not always practicable to make separations, even though the individual soil types occupy areas greater than 1½ ac. Consequently, in some of the complexes mapped, the areas of the component soil types are much greater than this. Also, some complexes are comprised of three soil types.

A *soil association* may be regarded as a complex of soil types on a broad scale of mapping. The Soil Association Map shows the soils of the area grouped on this basis, but in this case the map was compiled from the detailed soil maps after they were completed, and not by mapping the soil as associations in the field.