

Brickearth occurs in south Essex where it overlies Quaternary terrace gravels and London Clay of Eocene age. In places it is as much as 8 m in thickness. Quartz is the most abundant mineral and feldspar occurred in most specimens examined. Of the clay-type minerals mica is generally more abundant than montmorillonite which, in turn, is more abundant than kaolinite. Calcium carbonate occurs as grains, concretionary nodules and thin tube fillings. The moisture content normally varies between 12 and 25% and the soils are of low to high plasticity. Clayey, silty and sandy brickearths are recognized, with most belonging to the silty variety. They are uniform to well sorted with most samples having a positive skewness. The porosity of the brickearths ranges around 40% with a mean dry density of 1.68 Mg/m³. Brickearth can have a collapsible fabric. In the case of the brickearths from south Essex this was assessed in terms of collapse indices and the oedometer test. About half the samples tested in the oedometer were metastable. As would be expected, the degree of compressibility of these brickearths is high. The undrained shear strength of these brickearths showed that they ranged from very soft to very stiff. There is a general tendency for shear strength to decrease with depth as the soil near the ground surface has a 'crust-like' nature.