

ABSTRACT : A simple predictive model, referred to as Structured Cam Clay (SCC), was proposed recently by the authors. SCC was formulated for representing the mechanical behaviour of natural soils. In this paper, the main concepts and the formulation of the SCC are described and an extension of SCC for predicting the behaviour of artificially cemented clays is also presented. SCC is then used to predict the behaviour of structured soils in 'single element' compression and shearing tests. It is seen that the new model provides satisfactory qualitative and quantitative modelling of many important and unique features of the behaviour of structured soils. By using this model in finite element calculations, the response of footings founded on structured soils to loading is obtained. Some guidelines are also given to identify the importance of the structural features of the soil in determining the response of the footing. The new model is shown to be a powerful tool for geotechnical practitioners engaged in engineering design.