Creep S-Clay1S model: modeling of creep near slopes

Graduation assignment

CRUX is a leading independent consulting firm in the field of geotechnical engineering, geohydrology and environmental remediation.

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Modeling creep in, under and adjacent to a soil body is "common practice" in geotechnical projects. A common model in PLAXIS is Soft Soil Creep (SSC). However, the use of the isotropic model SSC has a number of disadvantages, especially as the steepness of slopes increases.

There is now an alternative user defined soil model to the SSC model: the Creep-SCLAY1S model. Although little practical experience exists with this model, it seems more suitable for modeling creep-related deformations at steep slopes.

A plan of action for a graduation thesis was prepared in collaboration with a TU Delft thesis committee consisting of Ronald Brinkgreve, Cor Zwanenburg and Arny Lengkeek. The main themes for this research are:

1. A parametric study;
2. Sensitivity study on overconsolidation;
3. Modeling of creep in and underneath a dike in Plaxis.

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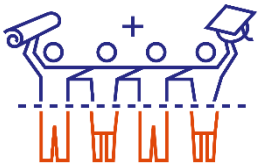

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