

Project proposal template

Graduate School studentships

March 2015

<i>Project title</i>	Residual strength controls on coastal cliff development in southeast England
<i>First Supervisor</i>	Dr <input type="text" value="Alan Dykes"/>
<i>Second Supervisor</i>	Maia Ibsen
<i>School</i>	Civil Engineering and Construction <input type="button" value="v"/>
<i>Other member of supervisory team (no more than three KU supervisors in total)</i>	Karen Clarke
<i>Specific requirements beyond 2:1 degree</i>	Ideally an MSc in Engineering Geology or Applied Geomorphology or similar, or an Engineering BSc or BEng with a substantial geotechnics component

Project summary
(max 4,000 characters)

Many parts of SE England are underlain by Mesozoic and Tertiary clays that have low shear strengths and are highly susceptible to landsliding. As such, they have given rise to many local landform types and engineering problems, particularly along eroding coastlines where ground movement is controlled by residual strength properties. However, many of the controlling influences of these strength properties remain unknown. These include responses to: (i) changing normal stress as a landslide system erodes, (ii) water chemistry (e.g. fresh vs. sea water), (iii) rate effects and (iv) combinations of these and/or other factors. This project seeks to review alternative test procedures, expand the body of test data that relate to these types of landslides and, in doing so, improve the understanding of residual shear strength through a programme of laboratory work. It can address relevant issues anywhere between 'civil engineering' and 'geomorphology', although the primary focus is on geotechnical properties of the clays. The project apparatus and facilities already exist, the concepts have been proved in principle and relevant supervision expertise is available.

