
Chapter 7 Mass-movement sites in Cretaceous strata

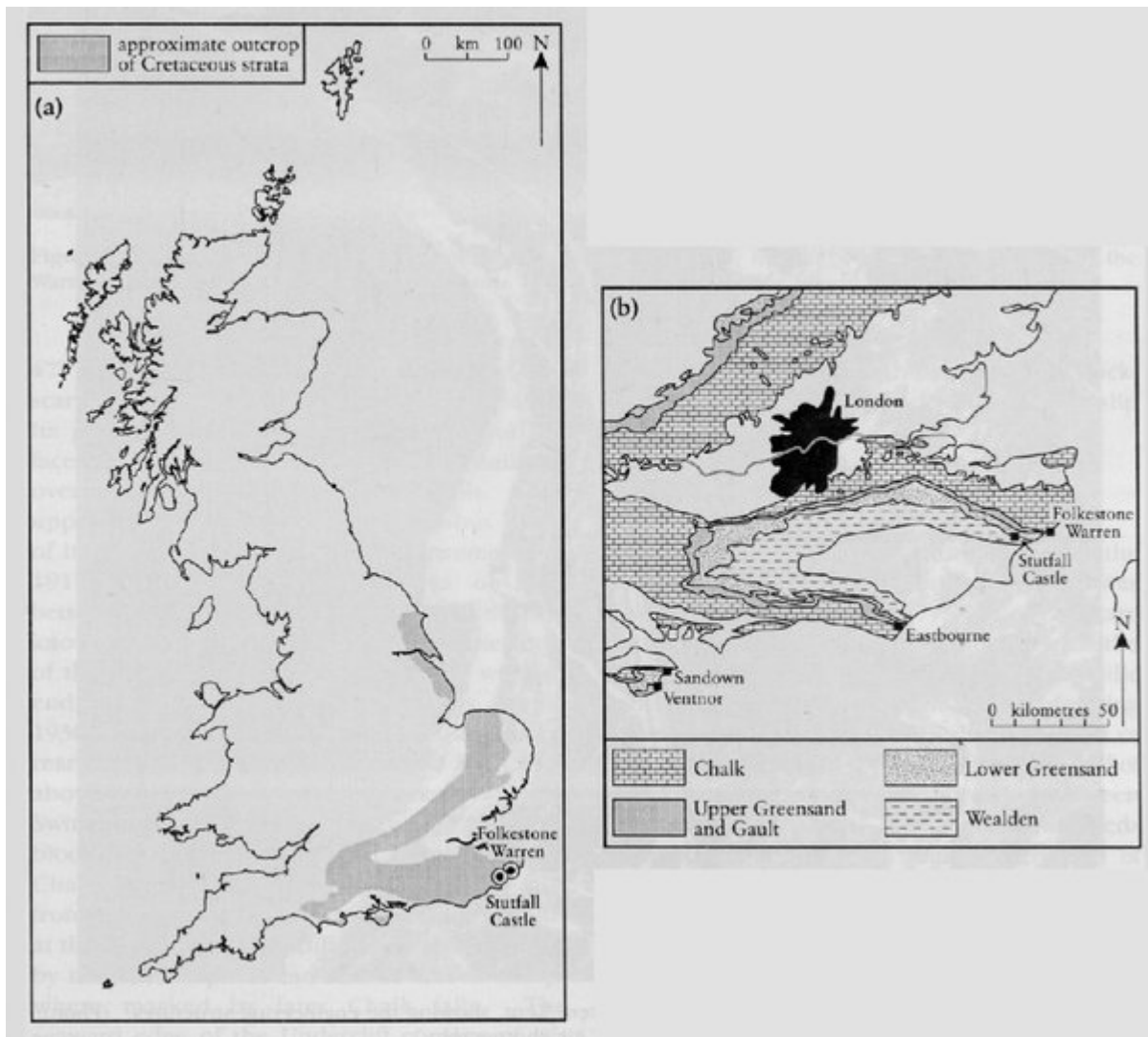
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Introduction

Considering their large outcrop (i.e. 4% greater in area than that of the Carboniferous strata) the Cretaceous strata of Britain have a relatively low density of landslides (38% of the number in Carboniferous strata). Of these, 58% are recorded in the national landslide survey as of unspecified type (Jones and Lee, 1994). Of those specified, 34% are complex and 19% are rockfalls. The Chalk, which is by far the largest formation considered areally (71% of the total Cretaceous outcrop) has a lower number of landslides (less than half) than each of the Upper Greensand and Gault, Upper Greensand, Weald Clay and Hastings Beds, each of which has less than one tenth of the area of the Chalk (Jones and Lee, 1994). Of these other formations, the Upper Greensand and Gault lead, with 31% of the landslips in the British Cretaceous outcrop. Unfortunately the survey does not provide statistics for these two formations separately. However, while 58% of the 273 slides identified in the Upper Greensand and Gault were of unspecified type, 49% were described as complex, and 23% were multiple rotational.

Two sites in Cretaceous strata have been selected (Figure 7.1). The first, Folkestone Warren, is one of the most intensively studied landslides in Great Britain. It is described in international reviews of landsliding and mass-movement processes (e.g. Zaruba and Mencl, 1969; Selby, 1982) and may therefore be claimed as a site of international significance for its mass-movement interest. The second site, Stutfall Castle, has two principal points of interest: it is on an abandoned marine cliff, and represents the types and sequence of mass movements characteristic of the degradation of such a cliff after removal of (marine) cliff-foot erosion. Secondly, it illustrates the way in which geotechnical understanding can, in certain circumstances, be enhanced by archaeological investigation.

[References](#)



(Figure 7.1) | (a) Areas of Cretaceous strata (shaded) and the locations of the GCR sites described in the present chapter. (b) The Cretaceous strata of southern England showing the locations of the GCR sites described — Folkestone Warren and Stutfall Castle. After Hutchinson et al. (1980).