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## Chapter 5 Mass-movement sites in Carboniferous strata

### Introduction

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Rocks of Carboniferous age are widespread in Great Britain (Figure 5.1); for example, they give rise to their highest hills in the Pennines. In this area there has been a large amount of mass movement, the largest and most interesting sites being found in the southern part, the 'Southern Pennines', broadly coinciding with the Peak District National Park. Several reviews of land-sliding in this general area have been produced (Cross, 1987; Doornkamp, 1990; see (Figure 5.2)).

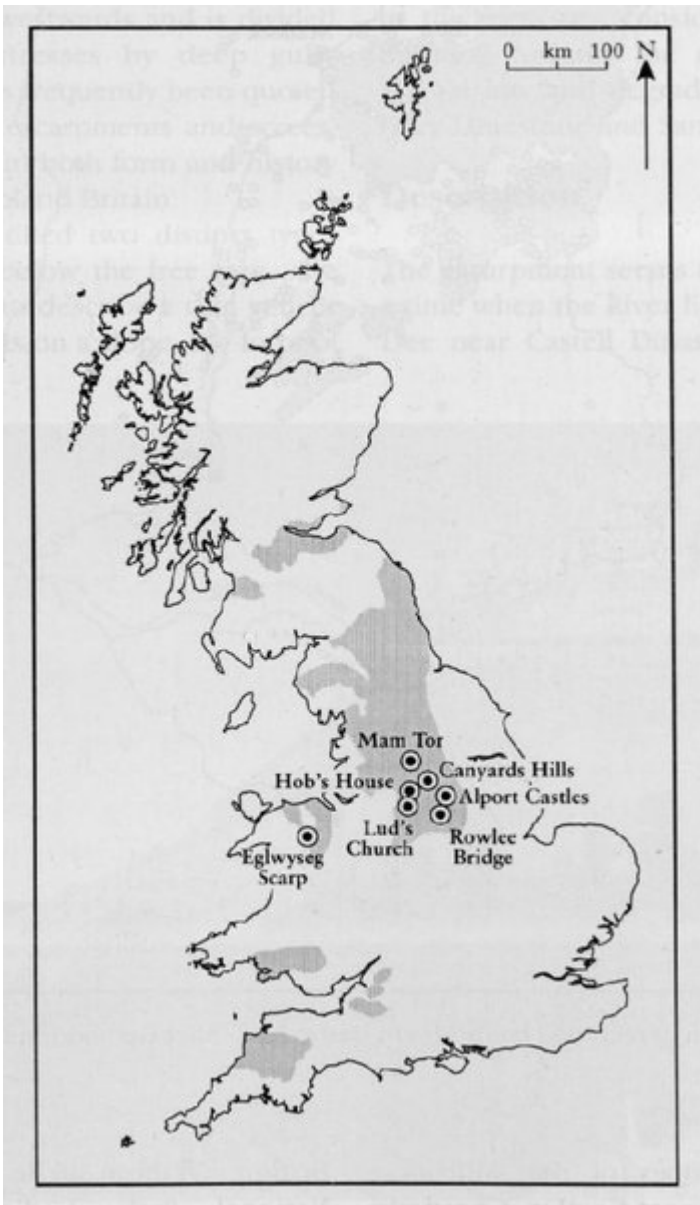
The Carboniferous strata of Great Britain have a high density of recorded landslides (9.0 per 10 km<sup>2</sup>). The Namurian sandstones (Millstone Grit) account for 42% of these, the Westphalian coal-bearing strata (Coal Measures) account for 33% and the Dinantian limestones (Carboniferous Limestone) for the remaining 25% (Jones and Lee, 1994). In the national review of land-sliding (Jones and Lee, 1994), 57% of landslides in Carboniferous strata were recorded as 'unspecified' in type. Of those with specified types, 25% were recorded as single rotational slips, 34% as 'complex', and 22% as translational.

Two sites have been selected from the Lower Carboniferous Dinantian strata for the mass-movements GCR network. Both are in the Carboniferous Limestone Series. They are Eglwyseg Scarp (Creigiau Eglwyseg) near Llangollen in North Wales, and Hob's House, at Monsal Dale in the Peak District, Derbyshire.

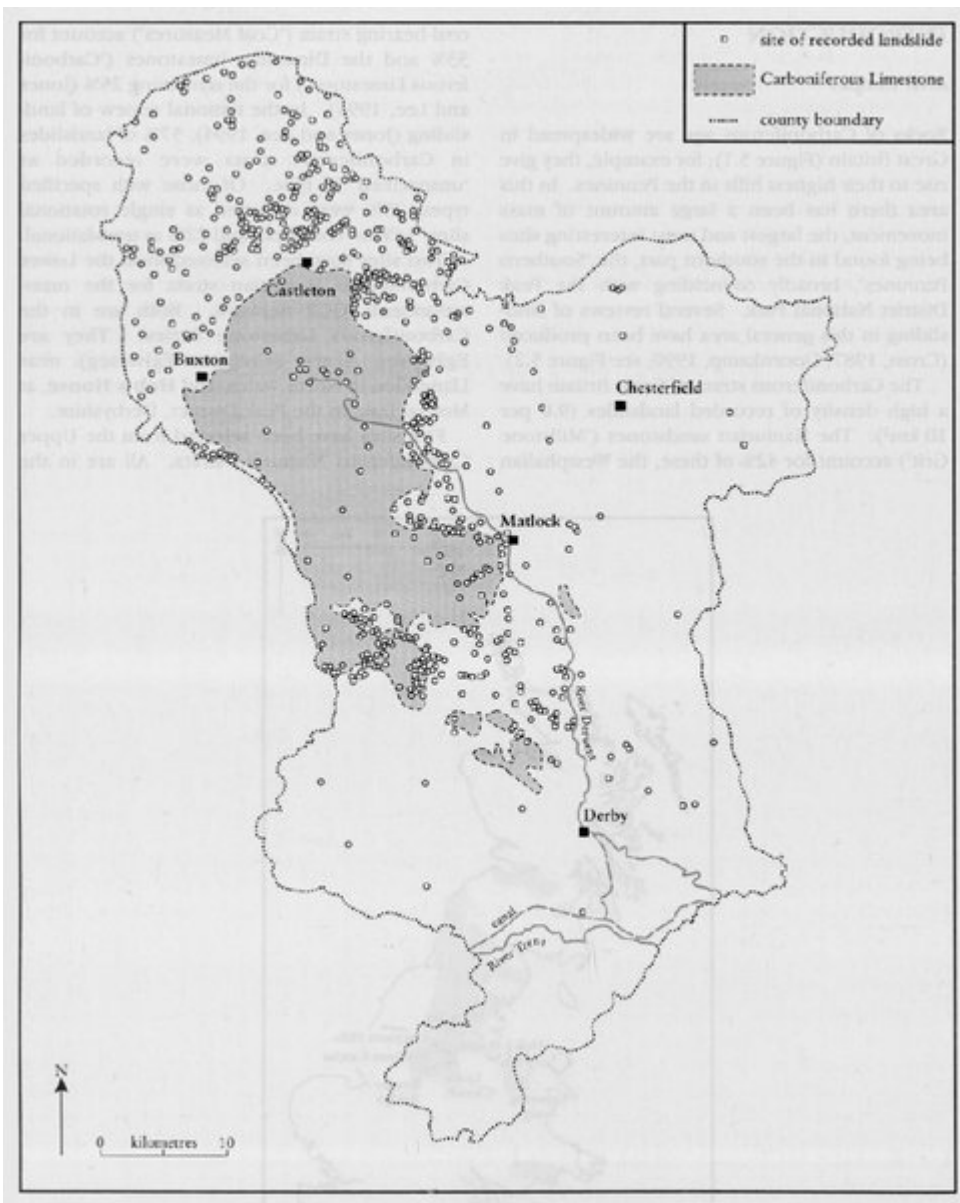
Five sites have been selected from the Upper Carboniferous Namurian strata. All are in the sandstones and mudstones of the 'Millstone Grit' series. They are Alport Castles, Canyards Hills, Lud's Church, Mam Tor, and Rowlee Bridge. Of these, all lie within the Peak District National Park, Lud's Church being in Staffordshire and the rest in Derbyshire.

For convenience, the GCR sites selected are discussed here in two sections, covering the Lower Carboniferous strata and the Upper Carboniferous strata respectively.

### [References](#)



(Figure 5.1) Areas of Carboniferous strata (shaded) and the locations of the GCR sites described in the present chapter.



(Figure 5.2) The distribution of recorded landslides in Derbyshire. After Geomorphological Services Ltd (1988); from Doornkamp (1990).