
Hob's House, Monsal Dale, Derbyshire

[SK 173 710]

Introduction

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Hob's House (Figure 5.10) is a rare example of a large-scale rotational slip in the Dinantian limestones of the southern Pennines. The sliding has taken place over a weathered horizon of lava.

Hob's House consists of a group of about seven large blocks of Carboniferous limestone standing on a low-angled shelf halfway down the otherwise steep northern slope of Fin Cop, at Monsal Dale, in the valley of the River Wye, Derbyshire (Figure 5.10) and (Figure 5.11).

The Hob's House mass-movement site at Monsal Dale should not be confused with Hob Hurst's House, a Bronze Age round barrow on Baslow Moor 10 km to the east, which was excavated by Thomas Bateman in 1853 (Bateman, 1861, pp. 87–88).

Description

The blocks at Hob's House are in the dark lithofacies of the Monsal Dale Limestones (Dinantian, Lower Carboniferous). The slope is about 330 m long and stands at an overall angle of about 35° (Figure 5.12). The vertical-sided blocks, standing on an approximately horizontal boulder-strewn shelf 65 m wide, are up to 7 m high and 20 m long and broad. They are backed by a 12 m-high vertical cliff-face in the limestone bedrock, above which the slope continues 150 m to the crest of the hill, at about 40°. Below the shelf the slope runs down 130 m to the river, at an angle of about 20°. The cliff contains an enterable fissure which has been penetrated for 20 m, indicating that it is in a shattered condition, and has itself been engaged in some mass movement (Figure 5.13). Coarse limestone scree mantles the shelf between the blocks and the cliff, and around and between the blocks. On either side, and uphill and downhill from these features, the slope is grassed over.

Some indication of the degree of displacement can be gained from the stratigraphical levels. Aitkenhead *et al.* (1985) point out that the 51.7 m section at Hob's House contains the Hob's House Coral Band, which is 0.4 m thick. Brown (1973) identified the cliff, and the 'towers' as containing his 'Hob's House Coral', and that this coral has dropped 15 m in the towers compared with the cliff. Furthermore, the coral is at different heights in the different towers.

Interpretation

The drop in altitude suggests that the blocks lie within the upper zone of a large-scale rotational slip. Aitkenhead *et al.* (1985) remark that landslips are not widespread on the Dinantian limestone outcrop in Derbyshire. They cite Hob's House as a rare example, where rotational slipping has occurred due to movement on softer-weathered igneous rocks, in particular the Shacklow Wood Lava. Such lavas are discussed by Ford (1977): characteristically, in the Derbyshire outcrop, their original minerals (from basalt, tuffs and dolerites) have broken down under chemical attack, usually resulting in clay minerals. The process forms a soft, green clay at the top of the chemically altered lavas, which are known locally as 'toadstones'.

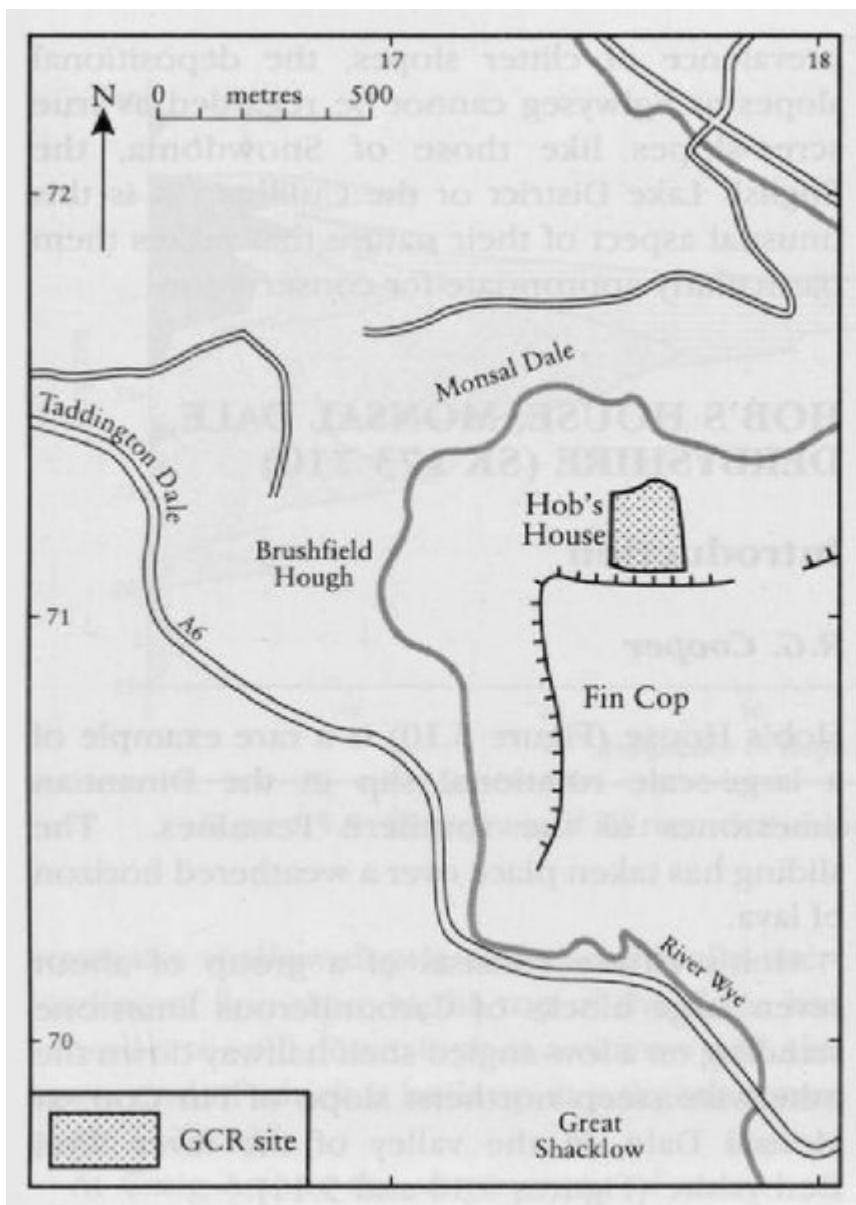
Conclusions

At Hob's House an unusual set of circumstances has led to a landslide which has resulted in several block-shaped limestone 'towers' of large size having become separated from the cliff behind them. Their situation, halfway down the slope, is also unusual.

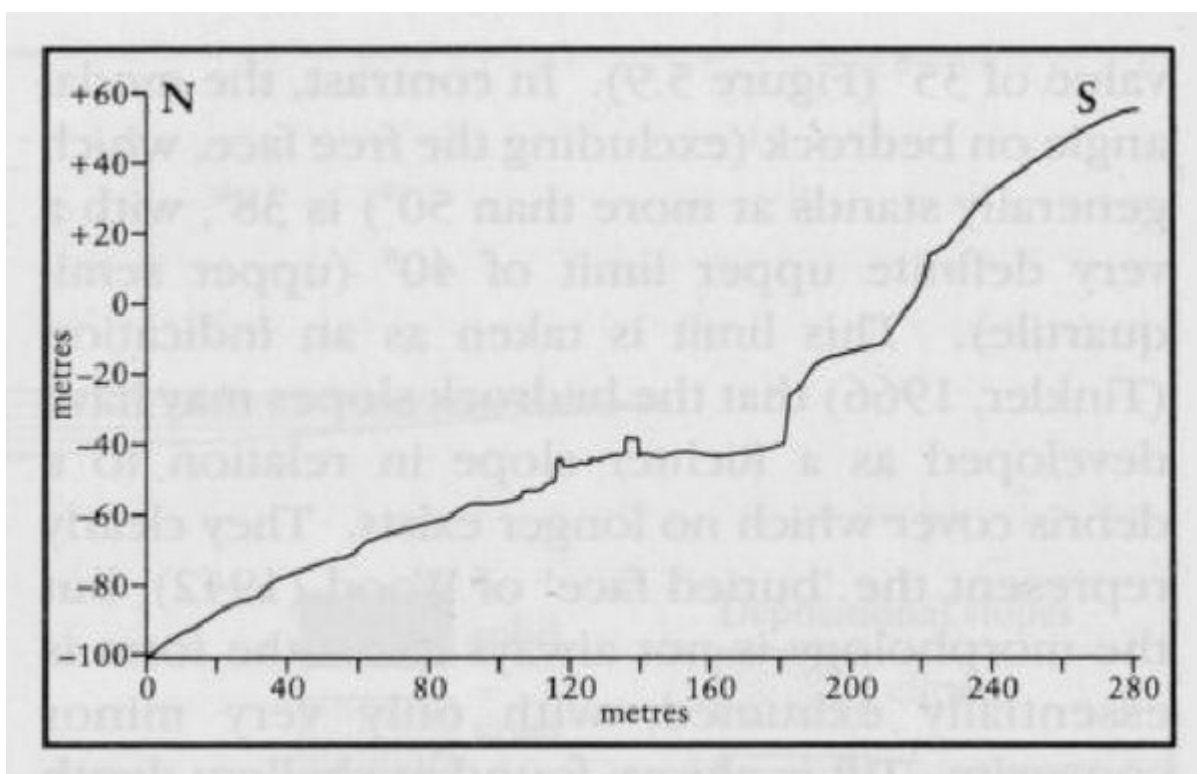
References



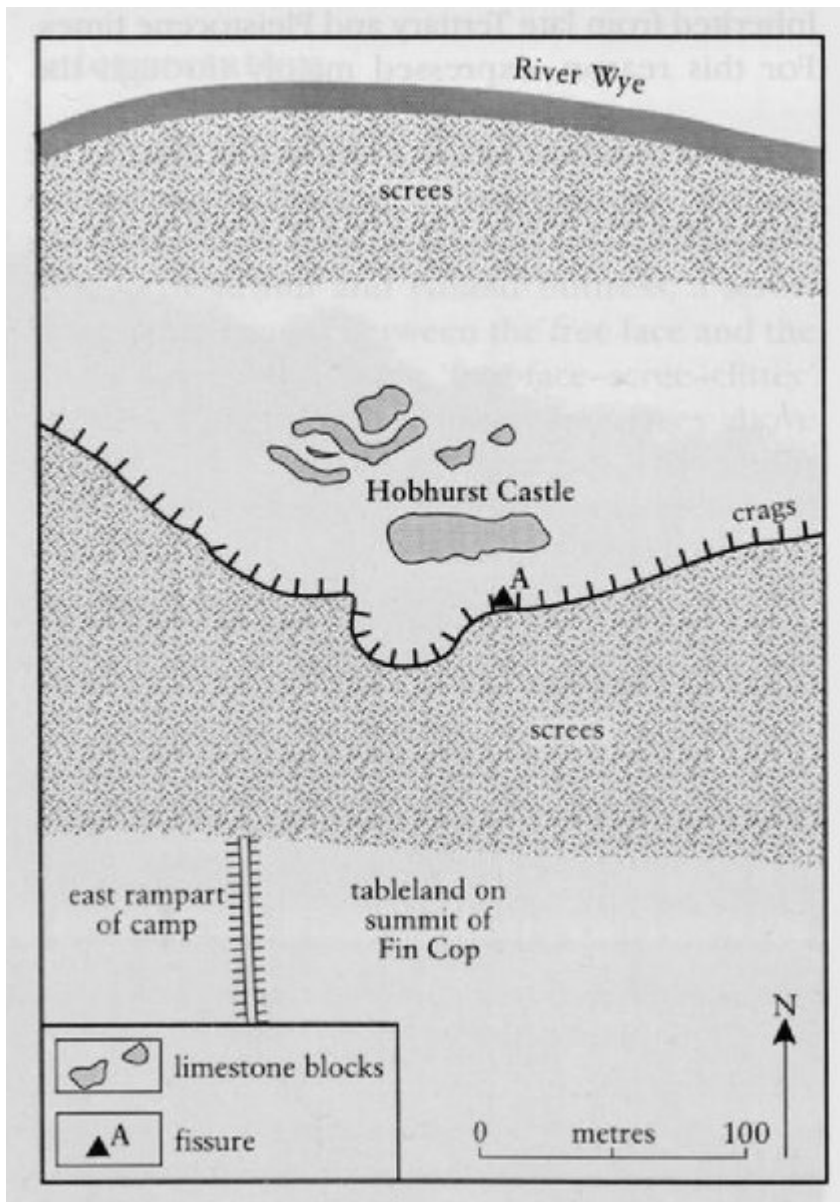
(Figure 5.10) The backscar and transported blocks of the Hob's House landslide. (Photo: S. Graham, English Nature/Natural England.)



(Figure 5.11) Location of Hob's House GCR site.



(Figure 5.12) Slope profile at Hob's House.



(Figure 5.13) Sketch plan of Hob's House (Hobhurst Castle). 'A' is the mouth of the fissure in the cliff-top, probably a camber structure or landslide 'labyrinth'.