## **Bedshiel and Raecleugh Head**

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O.S. 1:5 000 Sheet 67 Duns and Dunbar

B.G.S. 1:50 000 Sheet 25E Kelso

Route: (Figure 20) and (Figure 21)

These two short excursions in the Duns area illustrate features of ice-sheet decay. During the retreat of the last ice-sheet (c 15 000 years ago) vast quantities of meltwater flowed seawards draining the melting ice-sheet by means of channels and tunnels in the ice-sheet. Evidence of this drainage is preserved both as deposits such as kames and eskers and as meltwater channels. In the Duns area there are striking examples of both depositional and erosional features. 'The Kaims' near Bedshiel and meltwater channels at Raecleugh Head are worth a visit. Bedshiel Kames and Dodgen Moss, which lies immediately south of the kames, are designated Sites of Special Scientific Interest.

## 1. Bedshiel Kames: esker

The kames lie about 9 km south-west of Duns, off the B6456 Duns to Westruther road and south of the farms of Kettleshiel [NT 704 518] and Bedshiel.

The feature is named 'The Kaims' on the Ordnance Survey map, but is in fact an esker about 4 km long. Eskers are the sediments of meltwater streams flowing beneath, within or possibly on top of stagnant or slow moving ice-sheets. When the ice melts, the sediment flooring the tunnel or channel is left on the ground surface, leaving the characteristic sinuous ridge of sand and gravel. For a fuller discussion of eskers the reader is referred to Price (1973).

The excursion consists of a walk of about 8 km over pasture and moorland. The round trip from Kettleshiel to the esker, along the length of the esker and return to the road via Bedshiel should take about two to two and a half hours. However the excursion can be shortened to about 4 km with little loss of geological interest by walking the eastern part of the esker only, as far as the Fangrist Burn and then retracing one's steps to Kettleshiel. The curtailed walk will take one to one and a half hours

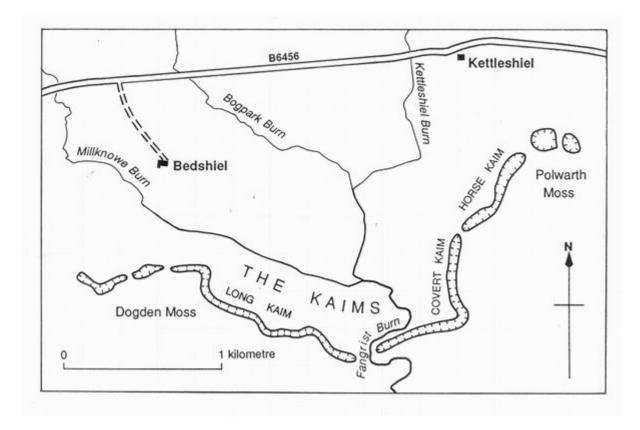
The esker is a sharp-crested ridge of sand and gravel which varies from about 1.5 m up to 12 m in height above the surrounding moorland. It traces a sinuous arc with a rough W-E alignment in its western part turning to a NE trend in the eastern part. Its situation on very gently sloping rather featureless moorland makes the esker a rather prominent element of the landscape. There is little exposure of the material forming the esker and there are no sections showing internal structure or bedding. The sediment consists of sand and pebble gravel with cobbles. The clasts are well worn and consist of greywacke, red sandstone and feldspar-porphyry. One or two small pits have been opened in the esker but they are long disused and are now largely grassed over.

## 2. Raecleugh Head: glacial meltwater channels

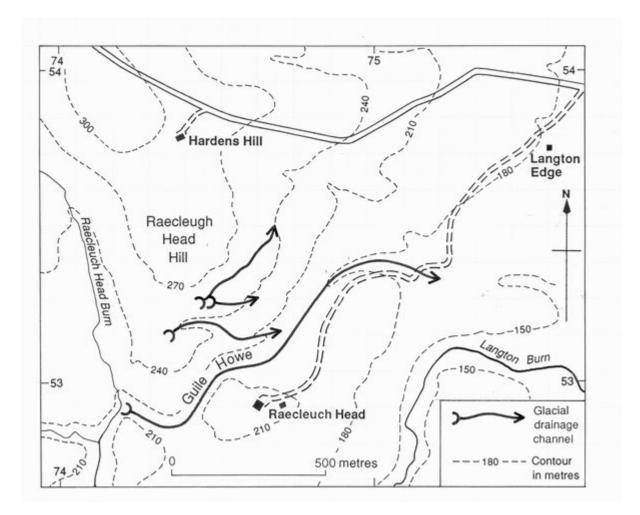
Raecleugh Head farm [NT 747 529] lies off the Duns to Longformacus road about 4 km west of Duns. Between the farm and the top of Raecleugh Head Hill there are several glacial meltwater channels. The most spectacular of these forms a deep sinuous depression just north of the farm. It is about one km long and over 30 m deep in places. The channel cuts down into the Lower Devonian Great Conglomerate. This feature is named 'Guile Howe' on the Ordnance Survey 1:10 000 map. This meltwater channel may be particularly well developed here because Raecleugh Head Hill forms a bluff or spur projecting south from the general south-facing slope of the Lammermuir Hills and the meltwater drainage, for the most part on or within the ice, here intersected and eroded the underlying rock. The channel may be best appreciated by going up to the farm and walking the length of the channel. It is also worthwhile climbing part way up Raecleugh Head

Hill and viewing the channel from the north side. There are a number of smaller channels higher up the hill and the view from the top is extensive in clear weather. An alternative route is to leave the Duns-Longformacus road near Hardens Hill and walk southwards to Raecleugh Head Hill and descend the hill to view the channel from above.

## **References**



(Figure 20) Bedshiel.



(Figure 21) Raecleuch Head